



iasl

**IASL Reports, 2003:
School Libraries
Breaking Down
Barriers**

**Selected papers from the
32nd Annual
Conference
of the
International Association
of School Librarianship
and the
7th International
Forum on Research
in School
Librarianship**

**Durban, South Africa
7-11 July, 2003**

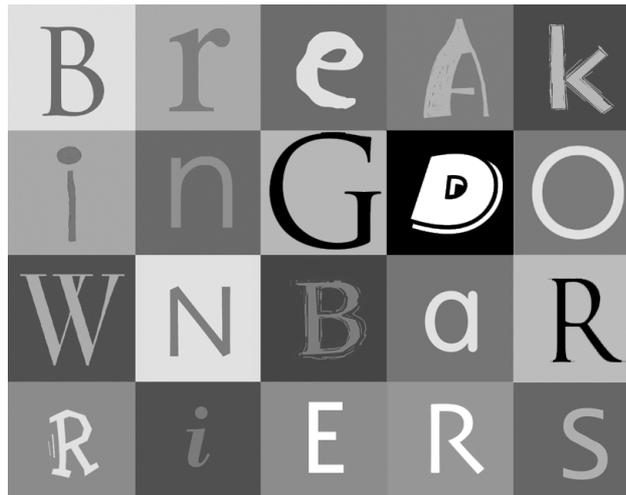


**SCHOOL LIBRARIES
BREAKING DOWN
BARRIERS**

Edited by

Sandra Zinn, Genevieve Hart and Eleanor Howe





IASL Reports, 2003
School Libraries: Breaking Down Barriers

*Selected papers from the 32nd Annual Conference
of the
International Association of School Librarianship
and the 7th International Forum on Research in School Librarianship*

Durban, South Africa
7-11 July, 2003

Edited by Sandy Zinn, Genevieve Hart and Eleanor Howe



iasl

**International Association
of School Librarianship**

2003
International Association of School Librarianship
Seattle, Washington, USA

Copyright © 2003, International Association of School Librarianship

All Rights Reserved.

Printed in South Africa by Citigate South Africa (Pty) Ltd., Durban.

No part of this publication may be reproduced for commercial gain without prior written permission of the publisher.

Copyright of works published in IASL Reports, 2003, is jointly held by the author(s) and by the International Association of School Librarianship. The author(s) retain copyright of their works but give permission to the International Association of School Librarianship to reprint their works in collections or other such documents published by or on behalf of the International Association of School Librarianship.

Authors who give permission for their works to be reprinted elsewhere should inform the IASL Secretariat and should ensure that the following statement appears with the article: Reprinted with permission, from IASL Reports, 2003: School Libraries Breaking Down Barriers, title, pages.

ISBN: 1-890861-28-6

ISSN: 0257-3229

Orders to:

IASL Secretariat

Voice: +1 604 925-0266

Fax: +1 604 925-0566

Email: iasl@rockland.com

Secretariat Address and Web Site:

Executive Director

International Association of School Librarianship

Box 34089, Dept 962

Seattle, WA 98124-1069, USA

Visit IASL's Web Site: www.iasl-slo.org

Acknowledgements:

Review Panel for the 7th International Forum on Research in School Librarianship

L. Anne Clyde	University of Iceland Iceland
Genevieve Hart	University of the Western Cape South Africa
Eleanor Howe	Pine-Richland School District USA
Dianne Oberg	University of Alberta Canada

Review Panel for the Professional and Workshop Papers:

Margaret Baffour-Awuah	National Library of Botswana Botswana
James Henri	University of Hong Kong Hong Kong
Sandra Lee	University of Hong Kong Hong Kong
Sandy Zinn	University of the Western Cape South Africa

IASL Executive Committee

Peter Genco	President (United States)
Sandy Zinn	Vice-President: Association Operations (South Africa)
Helle Barrett	Vice-President: Association Relations (Sweden)
James Henri	Vice-President: Special Interest Groups (Hong Kong)
Kathy Lemaire	Financial Officer (United Kingdom)
Penny Moore	Executive Director (New Zealand)

Contents:

Acknowledgements	page
Keynote Address	
The Politics of Making a New Space for School Libraries in South Africa	1
<i>Jenni Karlsson (South Africa)</i>	
 Papers in the 7th International Forum on Research in School Librarianship	
School Libraries in Pre-service Teacher Education: A Research Program Examining the Inclusion of School Libraries and Information Literacy in Pre-service Teacher Education from National and International Perspectives	13
<i>Marlene Asselin (Canada)</i>	
Meaningful Research Projects: Perspectives from High School Students	23
<i>Lois Barranoik (Canada)</i>	
Inquiry Takes Time: Breaking Down Barriers to an Understanding of the Inquiry Process of Grade 9 Students	35
<i>Jennifer Branch (Canada)</i>	
Barriers to the Influence of Research: Research Quality in School Librarianship	43
<i>L. Anne Clyde (Iceland)</i>	
Breaking Barriers with Student-centred Teaching and Learning using Library Books in the United States' Poorest Schools	54
<i>Eliza Dresang & M. Bowie Kotrla (United States)</i>	
Public Libraries Stepping into the Gap? A Study of School Learners' Use of Libraries in a Disadvantaged Community in Cape Town	71
<i>Genevieve Hart (South Africa)</i>	
Adapting education for School Librarianship: Addressing the Needs of the Part-time Student	83
<i>James Henri, Sandra Lee, Sue Trinidad, Alvin Kwan, Ming Lai, Felix Siu and Albert Chieng (Hong Kong)</i>	
Presentation and Analysis of Supervised Personal Work in France (T.P.E. / Travaux Personnels Encadrés): From Technician Barriers (or "walling up") to an Opening up to Pedagogy and Education for Information	99
<i>Vincent Liquete (France)</i>	
The School Library Team: How Does it Influence Learning and Teaching?	111
<i>Penny Moore & Maureen Trebilcock (New Zealand)</i>	
Breaking Down Barriers: Teacher-librarians as Partners in Internet Use in Canadian Schools	122
<i>Dianne Oberg (Canada)</i>	
Be Wise – Condomise	133
<i>Malin Utter (Sweden)</i>	
Breaking Down Barriers Through the Creation of an International Digital Library for Children	142
<i>Ann Carlson Weeks (United States)</i>	

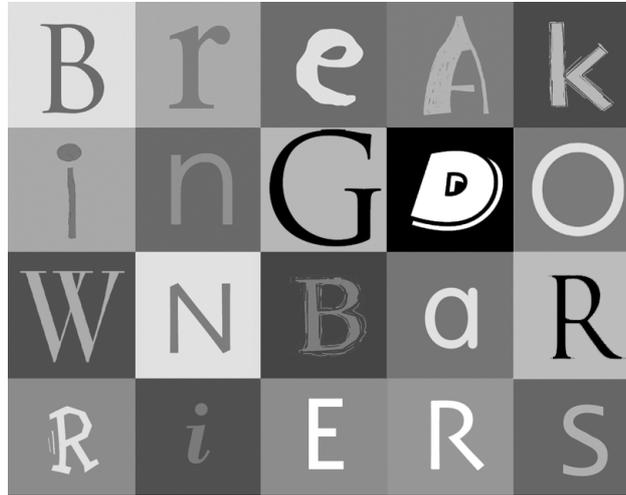
Contents:

Professional Papers	page
Building Bridges Through Literature: A Practical Example and Ideas about Resource-Based Learning as Teamwork Between a Teacher, a Librarian, and Students in a Project about African History and Literature <i>Marianne Ageberg & Lars-Göran Rådström (Sweden)</i>	157
ECOLE – European Collaborative Learning Network <i>Ulf Akerberg (Sweden)</i>	165
The Carnegie Revitalisation of Public Libraries in Africa: A Possible Tool for Breaking Down Barriers to School Library Development <i>Margaret Baffour-Awuah (Botswana)</i>	174
Notes	186
Information Literacy Education in Nigeria: Breaking Down Barriers Through Local Resources <i>Virginia Dike and Ogo N. Amucheazi (Nigeria)</i>	195
Information Literacy Alliances: University Library and High School Libraries Working Together for Life-long Learning <i>Verna George & Paulette Kerr (Jamaica)</i>	206
Creating Partnerships for Information Literacy in Jamaican Schools <i>Myrtle E. Harris (Jamaica)</i>	219
Library Practice For Young Learners (LPYL): Developing School Library Services For Primary And Secondary Schools In Disadvantaged Areas In South Africa 1997-2002: A Swedish – South African Project <i>Maud Hell, Catharina Engström and Lena Lundgren (Sweden)</i>	227
Breaking Down Barriers to Literacy: Creating a Story Hour that Contributes to Reading Comprehension, Tolerance and Multicultural Experiences <i>Eleanor Howe (United States)</i>	235
An Enabling Adult: The Teacher-Librarian and the Reading Environment <i>Susan La Marca (Australia)</i>	244
Rendering a Comprehensive School and Community Library Service to Remote Rural Communities in South Africa by Forging Partnerships <i>Sophia Le Roux and Francois Hendrikz (South Africa)</i>	258
Integrating a Community Library into the Teaching and Learning Programme of Local Schools: Experiences from Seshego Community Library, South Africa <i>M. Eddy Maepa and Rhandzu Mhinga (South Africa)</i>	270
Don't Buck It - Bend It: Using the Established System to Increase Your Influence to Create the Working Environment You Desire <i>Dianne McKenzie (Australia)</i>	280
School Libraries in the Sultanate of Oman: Breaking Down Barriers <i>May E. Moore (United States)</i>	286

Contents:

Bridging the Digital Divide through Schools: Developments in Sub-Saharan Africa <i>Stephen M. Mutula (Botswana)</i>	297
Eltham College: Linking Communities <i>Marie O'Brien (Australia)</i>	310
Collaborative Practice in an Inclusive Environment: Putting Learning into Context <i>Mary Reynolds and Irene Lategan (South Africa)</i>	318
Reducing the Digital Divide: The Role of School Libraries <i>Diljit Singh (Malaysia)</i>	323
Information Needs of Learners at Emzameni High School, Inadi, South Africa: A Preliminary Report of an Assessment Linked to the CHESP Community-based Learning Model <i>Christine Stilwell and Fiona Bell (South Africa)</i>	332
Gender Issues in School Libraries: Paradigm Lost or Found <i>Peter Tsikudhu (Botswana)</i>	344
 Workshop Papers	
New York City Partnerships: How Public Librarians and School Librarians Work Together in the CLASP Initiative <i>Sandra Bright and Katherine Todd (United States)</i>	353
Discover – Communicate – Collaborate - EdNA Online - http://www.edna.edu.au/ <i>Pat Pledger (Australia)</i>	361

Notes



Keynote Address

Jenni Karlsson
Director
Education Policy Unit
University of Natal
South Africa

A revolution that does not produce a new space has not realised its full potential; ... A social transformation, to be truly revolutionary in character, must manifest a creative capacity in its effects on daily life, on language and on space...(Lefebvre, 1991p. :54).

Introduction¹

This proposition from Henri Lefebvre, the French 20th century social theorist, challenges all of us in post-apartheid South Africa. It does this because we proudly assert that we are transforming our society, and we perceive the eye of the international community to be on us, looking for lessons for fractured societies everywhere in need of transformation.

South Africa is changing. But the increasing number of education policy reviews only a few years since their introduction, the discontent of many stakeholders that has given rise to new social movements (though still in their infancy) and vocal groups lobbying for education rights, the critique from the media and researchers, all point to the inadequacy of our policy changes in the immediate post-apartheid period and a growing realisation that they need at least to be refined and improved in the light of experience. If the school library sector in South Africa were to stand as a microcosm of that social change, then it is constructive to critically assess what we have achieved in the school library sector by considering the implications of Lefebvre's assertion. Are South African policy-makers producing a new space and new practice for school libraries that will respond to the imperatives of the post-apartheid era? Or is it only more of what we did in the apartheid era?

In this paper I consider the politics around the school library in South Africa and what is emerging during this post-apartheid period of social transformation, to assess the politics of the 'new space' being produced through that transformation. This requires me to look back, through memories and images, at what was inherited from the apartheid era – an approach often criticised by embarrassed white South Africans who wish to be blinkered, and move on, ignoring our painful history, our roots. Then I revisit the process of formulating national regulatory policy for school libraries in South Africa, and try to understand the obstacles to its progress. My conclusions will point to what we might need to look for in the emerging policy for a 'new practice' and 'new space' for school libraries.

The Importance Of Spatial Considerations

Why is it important for us to think about space and spatial practice when there are so many other pressing issues, such as persisting inequalities of provision, infrastructure backlogs, HIV/AIDS and orphans who can't attend school because school principals and teachers are illegally demanding school fees from them? As Lefebvre has argued, it is because space is simultaneously a social *product* and a *process* that shapes social interactions (Lefebvre, 1991). Although spatial considerations are under-researched in education, they are significant in schools for two important reasons. In the first place, the configuration of school sites, the allocation of classrooms, and how teachers use their

space (i.e. their spatial practice) and how learners experience it - all these contribute to the constitution of school social relations. It is our school spatial practice that leads us to perpetuate or renegotiate relationships, for example gendered roles, among teachers, learners, principals or head teachers, and school governing bodies (McGregor, 2000).

Secondly, schools are social formations that have a reproductive role (Teese, 1997), through the time-space paths of the timetabled curriculum and social practices, in nurturing dominant social values learnt during rituals such as assemblies and equipping the young with the skills and knowledge for adulthood, the working world and a lifelong meaningful engagement in society.² There is a circularity about the process: we shape our world as it shapes us. Thus, how we clean our schools, how we manage them, how we create exclusive places within the school site for teachers, prefects and senior grades, and how we signpost and advertise the school: all these shape the thinking of future generations of leaders, professionals, workers and parents.

For South Africa, spatial considerations are especially relevant because of the essentially spatial character of apartheid politics whereby learners were segregated from each other to attend differentiated race-based schools funded by a discriminatingly racist state.³ Those policies from the past remain as traces in present school space and the more deeply etched the more profound may be the effect on learners. Nelson Mandela has also written with conviction about the dialectics between space and social relations and its lasting effect:

...history is rooted in our hearts and our minds, but it is also ever-present in our environment – and not only in obviously man-made things, such as buildings and objects of art. ... The traces of history do not disappear. (Foreword to van der Merwe and Faber, 2003, p. 4)

Notwithstanding the embeddedness of the past in the present, Lefebvre's thesis proposes that spaces of the old order are inadequate for activities of the new order. Social change manifests itself in the production of a new space through new objects and practices or their configuration. You can see an example of this a few blocks from Durban's International Convention Centre, in a building where black workers had to obtain permits to reside in Durban's white areas during the apartheid era.⁴ That practice of managing a black person's access to the 'white' city was known as influx control. Since 1994 the site has been transformed into the KwaMuhle Museum to showcase educational exhibits about local black history, and the courtyard where aspirant workers waited is now a popular space for open-air book launches. Obviously such recycling and re-invigoration of old spaces for new ways of living and working does not happen overnight. But can we say that South Africa's schools and school libraries are truly undergoing social transformation from apartheid to democracy and equity if the objects and spatial practices that structured and meant unjust discrimination remain mostly unchanged? Let's review the situation regarding school libraries during the apartheid era.

The Apartheid Inheritance

Studies conducted by the National Education Policy Investigation's Library and Information Services Research Group (NEPI) (National Education Policy Investigation 1992), the Education Policy Unit (EPU) (Stadler 1993) and the government-commissioned School Register of Needs (SRN) (Department of Education & Human Sciences Research Council, 1997) found that extremes characterised the school library landscape during apartheid. In 1996 of 26,734 schools, only 4,502 (16.8%) had libraries (Department of Education, 2001, p. 39). While these libraries were not only (but predominantly) in schools for whites, white learners were affirmed and advantaged to a superior extent over learners of other racial groups. But the majority, being black learners, were subordinated and oppressed with negligible or no provision, and coloured and Indian learners were less advantaged than white learners but more advantaged than their black peers. Thus, the post-apartheid education system inherited a situation in which eighty percent of all South African schools had no libraries and insufficient learning materials for learners to access the curriculum (Bot, Dove et al., 2000). Although this percentage is not disaggregated to reveal racial difference, without doubt the overwhelming majority of these schools would have been for black learners.

Since 1998 I have been researching the discursive arena of school space and spatial practices by examining memory accounts about attending apartheid-era schools and photographs of schools.⁵ On the whole the memory accounts were inconclusive in confirming the extremes noted in the EPU, NEPI and SRN reports, since the sample was

too small to be demographically representative and the focus was not specifically on school libraries. Nevertheless, five of the adults mentioned school libraries in passing and we can glean some insights from their reminiscences, not only about school libraries, but also as the representative voices of countless other South Africans. Nelson Mandela referred to this value in his foreword to a book about the lives of ordinary South Africans:

[f]or years, historians distorted South Africa's history, some deliberately, others perhaps unknowingly. The story of the powerful and wealthy was told in great detail, while the story of the majority remained largely unheard. Much of the history of ordinary persons has been lost and is still in danger of disappearing (van der Merwe and Faber, 2003, p. 4)

Let us, therefore, turn to the memories of some 'ordinary persons'.

In his account, Bheki, a black adult who had attended government township schools only, was silent about any school or public library, suggesting his paucity of such institutional experiences. However, Lindiwe, a black female informant, held a privileged position compared to most other black learners. She had attended a prestigious secondary school started by American missionaries. This accounted for her recollection of a school library practice that compared favourably with those of white learners:

We used to have the school library. ... [Our library was] just for the school. And we used to have periods to go and attend to the library and during breaks it was open for us to take and go to the library.

Conditions in Indian schools were neither as adverse as township schools, nor were they as privileged and well resourced as schools for whites. Laila, a female Indian informant, recalled how compromises were made at her primary school building in order to ensure that it provided the education desired by that community:

There was no extra resource provision, specialist rooms or anything like that. So classrooms were turned into a music room or a gym, a library, periodically...

The primary schools that Vishnu, another Indian informant, attended also had no library, so he relied on a public library in the city:

...in those days in the Indian community the Victoria Street library was one of those few areas where you could get books and things, so it became an attraction and because people used to go there often, on a Saturday normally, to go and borrow books, or do some research, or get some reference, you automatically fell into that pull towards that library.

It was only at secondary schools that Indian learners like Vishnu had access to a full library service within their schools:

...It was the high school that had the library when I went in there from Std 7 onwards and I did a lot of reading... The library was, I think if I can recall, pretty well stocked because I used to borrow books widely from it.

For Lucy, one of the white women, the library was a place for emotional retreat and might echo the experiences of many other middle class white school girls attending a well-resourced school that shielded her from the woes of South Africa's troubled society:

...I used to like to go and sit in the library at break and read poems and I was a typical teenager all starry eyed.

Jay also mentioned the library of her secondary school for white girls. However, her reference to it was couched within her observation of a racialised division of labour:

...books in the library would have been shelved by black clerical assistants. There was quite a strong reinforcement [at the school] of the hierarchy of race in the society...

Jay's critique would seem to be her adult post-apartheid interpretation of the past. In all likelihood, she would not have had the critical tools at the time of being a learner to understand the politics of race in what she saw and articulate it as white supremacy constructed as a natural order. But the fact that she remembered that library practice supports the argument that schooling, including school management practices, has a reproductive function even through the informal, hidden curriculum.

Five years into the post-apartheid era, in 1999/2000, I conducted further research, which confirmed that little had changed. Photographs of the schools I studied clearly reveal the continuity based on those old racial cleavages. In 2000 the SRN Survey was repeated and it was found that since 1996 3% more schools nationally had libraries.

The lack of significant improvements since 1994 in the exemplar of library-based collections, suggests that our social transformation has not reached its full potential yet and there is still much transformative work to be done. The evidence of continuity in the apartheid conditions within the school environment is disturbing for it points to the difficulty of changing 'old spaces' and redressing apartheid inequalities and injustices. In the euphoric period following the 1990 release of political prisoners and unbanning of organisations and the subsequent 1994 national elections, many within the education sector invested their energies in developing policy options and drafting policy frameworks that would drive the post-apartheid social transformation to change 'old spaces' like the inequalities in school libraries. How that process of policy development unfolded in the school library sector may also give us insight about the 'new space' being shaped for school libraries.

In the next section I move from the experienced, tangible space of the school library to the abstract, discursive space of school library policy.

The Incomplete Policy Process

Before the flood of post-apartheid policies, in November 1995 the Education Policy Unit at the University of Natal hosted a national conference on *School Learners and Libraries* (Karlsson, 1996). The aim was to examine library models, already tested internationally, and discuss their suitability, strengths and weaknesses, for wide-scale implementation in post-apartheid South Africa. The models were options for alternatives to those commonly found in developed English-speaking countries and South Africa's apartheid-era schools for white learners i.e. the single school library that provides a centralised professional service.

Without being diverted into a debate about the merits of each model, I briefly outline them here:

- The shared or joint-use community-school library found in countries like Sweden that have many scattered pockets of communities with expectations of a high quality library service and information access;
- The regional library, found in some Australian states, that coordinates, services and augments local school collections and provides a professional and technical support structure;
- The mobile library bus or boat, used in some parts of rural Brazil, for a professional librarian and collection to regularly visit teachers and learners at schools without libraries;
- The virtual library of the Internet, an information and communication technologies (ICT) model widely used in developed countries and touted as a quick, efficient and inexpensive way of accessing information from a varied array of local and global sources.

In addition, the conference considered the classroom box library enthusiastically promoted in many South African rural schools by a non-governmental organisation, and Namibia's integrated curriculum approach for developing information literacy.

In retrospect the conference was significant at several levels. It brought together a range of key national and provincial stakeholders, including those previously excluded from such policy debates, to think beyond the critique of apartheid and begin to consider alternative responses that might be appropriate for local conditions. The publication of conference papers was important for continuity of the debate and, perhaps most important of all, a conference resolution

was sent to the national Ministry calling on the Department of Education to develop policy that would address inequities in the school library landscape. The Department's response was positive: within a year a working group was established and after a process of consultation and deliberation, in 1998 the *National Policy Framework for School Library Standards* (Department of Education 1998) was completed.⁶ A national audit of libraries and collections in schools (Barth, Paterson et al., 1999) was conducted to provide a base of detailed information to guide further planning and development. Given the productivity of those first few years, it was disappointing when the policy process began to drag. The reliability of the audit was questioned (Hart, 2002), and the national Ministry has yet to finalise post-apartheid school library policy, norms and standards (pers. comm. Mandla Maseko, April 2003).

Sadly, in the absence of clear direction that should have come through policy and a regulatory framework, conditions in many of the existing school libraries have been allowed to deteriorate. In an outstanding article published in the booklet *To Set The Ball Rolling* (Wettmark, 2002) about the Library Practice for Young Learners project, Genevieve Hart (2002) broached the way in which the popularly elected post-apartheid national government has neglected school library development opportunities, allowing librarian posts and collections to wither away and, in some cases, whole libraries to be dismantled. The lack of national government commitment to policy, attended by a lacklustre fiscal provision for school libraries, has yielded a situation where, as Hart asserted, almost all functioning school libraries now survive through school governing body funds levied as learner fees, and there is a 'greying' of the profession as universities reduce their offerings for school library courses. Are these omens of the 'new practice' and 'new space' for school libraries in post-apartheid South Africa?

Such developments in a post-apartheid era are puzzling because the government's outcomes-based education (OBE) curriculum espouses a learner-centred pedagogy contingent on resource bases such as those associated with school libraries. It seems contradictory that the national Ministry has taken so long to gather momentum for school library policy although the rationale for library collections of learning resources was already implicit in curriculum policy in 1997 (Department of Education 1997a; Department of Education 1997b; Department of Education 1997c).⁷ In the meantime many provinces have proceeded to develop their own policies, in terms of their constitutional competence, but opening themselves to the danger of disjuncture when the national regulatory policy is finalised. What dynamics and obstacles inhibited the national policy process?

One of the obfuscating dynamics was that the two Departmental groups tasked with developing curriculum and school library policies in 1996-7 worked separately rather than collaboratively, and the lobby within the school library sector was not sufficiently strong at that stage to insert the school library into the curriculum discourse. This limited the opportunity for each group to benefit from the other's expertise and understanding, and the overall effect was the marginalisation of school library matters within the Ministry's policy agenda. Thus, while the *National Policy Framework for School Library Standards* included a chapter on the implications of the OBE curriculum, the parallel curriculum policy documents were silent about school libraries and demonstrated scant appreciation of the meaningful linkages between curriculum and resources in library collections.⁸ This silence bled into the Curriculum Review Report (Department of Education 2000) and subsequent curriculum revisions as well:

...[The] School Libraries and Youth Services Interest Group made two representations to the Review Committee to advocate a more explicit recognition of the role of libraries in the revision of C2005. But it is frustrating to report that, despite assurances that the revision would "please" us, in fact there is still no mention of libraries in the two Revised National Curriculum Statements of 2001 and 2002 (Hart, 2002, p. 9)

The meaningful connection between the requirements of the curriculum and the potential of school libraries to serve those needs was not sufficiently established in the consciousness of curriculum developers. The dislocation is unfortunate because one assumption of the OBE curriculum is that teachers and learners can access a rich variety of resources that enable critical thinking and problem solving, and promote values that build social cohesion as well as tolerance. Such a resource base would need to be more than a textbook and a few worksheets and photocopies. It must include diverse forms of learning support materials and offer multiple ideological positions and interpretations of events.⁹

Genevieve Hart (2002) iterated the claim made by the late Sandra Olën in 1996, that may explain why curriculum policy makers have failed to make explicit the connection between curriculum and library-based resources, and why senior managers have tended to marginalise school library policy development. Olën's point was that only about one quarter of employed teachers in South Africa had experienced libraries in their childhood. To understand the scale of this problem we need only look to this province of KwaZulu-Natal where at least 70,000 teachers are employed, over 50,000 of whom would have attended schools with conditions like the township school I photographed – probably worse! If Olën's claim applies to teachers, would it not equally apply to post-apartheid policy makers? Could it be that the vacuum in the experience of those senior education managers who knew only disadvantaged, under-resourced and deteriorating school environments, has shaped a perspective that sees school libraries and librarians as unrelated to curriculum access and hence as expendable luxuries? Is this why government can commit funds to its *Masifunde Sonke* reading project, yet not finalise the school library policy that should underpin and drive that project?

Other factors within the structures and operations of the Department and in the interface with the school library sector may also account for the dismal progress in finalising school library policy.

- The Working Group's tentative formulation of norms and standards in what was called the *Policy Framework*, signalled their inexperience in government processes and naivety about the politics of policy formulation, leading to the diminished status of the document.
- The start-up of the Library Practice for Young Learners project in 1997, though intended to pilot aspects of the *Policy Framework*, might have diverted the attention and energies of the national Department's officers dealing with school library matters at a lower level as well as lobbyists within the sector.¹⁰
- It also came to light recently that although it had been reported to the sector that the *Policy Framework* was presented to the Heads of Education Departments Committee (HEDCOM) and approved, this was never recorded in their minutes (pers. comm. Lyn Metcalfe, 25 April 2003) – an omission with profound implications for the *Policy Framework's* status.
- Institutional memory has been jeopardised by staff turnover and restructuring of the bureaucracy, and led to lost electronic versions of policy drafts.
- Lastly, in restructuring the national Department of Education, school libraries, though a crosscutting matter, were retained under the scope of the senior manager of the Further Education and Training branch, which deals with grades 10-12, rather than the General Education and Training branch for grades R-9 where the bulk of school learners are enrolled. Although the decision appears to have been intended to provide continuity and not endanger institutional memory loss, it is doubtful that that logic will be sufficient on its own for championing school library policy development that must apply to all school grades.

The vacuum of previous experiences in school libraries and the Departmental and sector factors are perhaps the main obstacles that have cost several years in policy adoption and implementation. They point to the weak areas of the post-apartheid transformation and the inadequacies in the politics between policy makers and the sector for producing the 'new space' and 'new practice'. They point to the need for school library managers and practitioners to resist the security of a comfort zone among their own colleagues, and integrate their concerns in the more profound project of education transformation by articulating access to a library-based collection and librarian within an education rights framework.

Despite the robust consensus reached within the sector around the *Policy Framework*, the delay has also presented the opportunity for aspects of the *Policy Framework* to be re-drawn for a policy that may have a narrower vision of post-apartheid school library provision – a vision that sets aside the many alternatives to the expensive centralised library and professional librarian in each school. However many models are eventually recognised, policy needs to provide a mandate that recognises our history and our diverse schools and enables provincial departments to implement equity while responding appropriately to their local conditions. A blind approach based on 'one size fits all' may be based on equality, but it runs counter to equity that seeks to redress historical imbalances now and not in some idealised future where each of South Africa's approximately 27,000 public schools has a centralised library and librarian. How many years will it take for all South Africa's schools to have libraries if the 3% rate of additional school libraries achieved between the 1996 and 2000 SRN Surveys is maintained?

Conclusion

Policies that must transform South Africa's school library landscape and produce new collections and new ways of thinking about and practicing ownership and delivery of learning resources and new ways of being a librarian, must be as much about our vision of the future as our determination to resist repetition of the past with sharp divisions – no longer on the basis of race, but social class. Post-apartheid policies will inevitably contain a reaction to apartheid experiences and conditions. But we must harness those memories to creativity and hope for formulating a transformative school library policy that will withstand any elitism and serve the weakest and most vulnerable of our learners: the orphans and those affected and infected by HIV, and the rural and urban poor.

Jonathan Jansen (2001) has identified a tendency for some education policies to become symbolic in that they represent government's espousal to transform education and create new spaces and practices but change fails to materialise. Senior managers, school librarians and lobbyists need to watch and find ways to guard against this happening with school library policy. As drafts of school library policy emerge the sector will need to ask questions about the transformative strength of the new library practices and spaces, the strength of the political will to implement policy locally, the commitment of sufficient resources for sustained implementation, and the extent to which equity will be realised for the masses of learners in township and rural schools and caring for their loved ones and their siblings at home.

Although I have been critical in this paper about the lapse of years since the *Policy Framework* was issued in 1998 and the danger of now narrowing the vision articulated in that document, we must recognise the imperative to re-conceptualise the school library service and the role of the school librarian for the era of HIV/AIDS. This is an era that will increasingly be characterised by classes of teachers and learners who might not be there as regularly as we have come to expect in our traditional notion of the school site. This is an era in which we have to consider new modes for teaching and learning, for delivering lessons to learners in another space, new ways of marking their assignments and new ways of giving them feedback to continue their learning. Maybe school managers and governing bodies will begin to run their schools, the timetable and formal lessons differently. School library policy should be in the vanguard of redefining the school library contact zone and developing new spatial practices for the devastating social transformation that the HIV/AIDS crisis will surely bring. The policy hiatus has therefore offered us the chance to put the lens again to what we can learn from other countries further along in responding to the pandemic, and harness the minds of lateral thinkers and civil society, to conceptualise norms and standards for a school library space and practice that penetrate and burst the barriers of this era.

Notes

- ¹ I received comments from my Education Policy Consortium colleagues, Michele Berger and John Pampallis, to an earlier draft. The opinions expressed here are, however, my own.
- ² Elsewhere I have looked at how school cleaning practices perpetuate gender stereotypes (Karlsson, J. (2000). School cleaning and the hidden curriculum. *The Teacher*. Johannesburg. <http://www.teacher.co.za/200102/cleaning.html>.
- ³ The spatial and embedded constitution of apartheid discourse in schools and the implications for the post-apartheid era are the subject of my larger study, some portions of which are published elsewhere.
- ⁴ The racial designations that I use are classifications imposed by the apartheid regime and still in use as a way of tracking equity and racial integration. The designations refer to those of European settler origin (white), settlers from the Indian subcontinent (Indian), those of indigenous African origin (black), and those from earlier mixed parentage (coloured).
- ⁵ The memory accounts were from a sample of adults comprising three white women, two Indian men and one Indian woman, one black man and one black woman. The selected institutions comprised two schools formerly for white learners, two formerly for Indian learners, one for black learners in a township, and the sixth school being a post-apartheid school i.e. built and opened after 1994 in a European Union funded redevelopment area serving the urban poor.
- ⁶ Limited copies of an abridged 1999 version were distributed to senior managers of the school library sector.
- ⁷ Outcomes for information literacy and related skills were integrated into learning areas (subjects).

- ⁸ Having been a member of the Working Group that developed the *Policy Framework for School Library Standards*, I can attest to the several attempts made by the Officer coordinating our Group to assist her curriculum counterparts to build the conceptual linkages in their policy framework.
- ⁹ The new conceptualisation of learning resources also incorporated oral history, and indigenous knowledge and skills imparted through local people.
- ¹⁰ For more about the project, see another session/paper at this conference.

References

- Barth, K., Paterson, A., Visser, M. M., and Moila, B.M. (1999). *South African school library survey 1999: national report (final draft)*. Pretoria: Department of Education and Human Sciences Research Council.
- Bot, M., S. Dove, et al. (2000). *The Education Atlas of South Africa 2000*. Houghton: The Education Foundation.
- Department of Education (1997a). *Foundation phase (grades R to 3) : policy document*. Pretoria: Government Printer.
- Department of Education (1997b). *Intermediate phase (grades 4 to 6) : policy document*. Pretoria: Government Printer.
- Department of Education. (1997c). *Senior phase (grades 7 to 9) : policy document*. Pretoria: Government Printer.
- Department of Education (1998). *National policy framework for school library standards*. Pretoria: Department of Education.
- Department of Education. (2000). *A South African curriculum for the twenty-first century: report of the Review Committee on Curriculum 2005*. Pretoria: Department of Education.
- Department of Education. (2001). *Report on the school register of needs 2000 survey*. Pretoria: Department of Education.
- Department of Education & Human Sciences Research Council. (1997). *School register of needs survey*. Pretoria: Department of Education.
- Hart, G. (2002). The LPYL in context: changing minds about school libraries in South Africa. In L. Wettmark. (Ed.). *To set the ball rolling, Library Project for Young Learners (LPYL): a Swedish-South African school library project 1997-2002*. (pp.3-10). Karlstad: Bibliotek i Samhalle.
- Jansen, J. (2001). Explaining non-change in education reform after apartheid: political symbolism and the problem of policy implementation. In J. Jansen and Y. Sayed. (Eds). *Implementing education policies: the South African experience*. Cape Town: UCT Press:
- Karlsson, J. (Ed). (1996). *School learners and libraries*. Durban: Education Policy Unit (Natal).
- Karlsson, J. (2000). School cleaning and the hidden curriculum. *The Teacher*. Retrieved from <http://www.teacher.co.za/200102/cleaning.html>.
- Lefebvre, H. (1991). *The production of space*. Oxford: Blackwell.
- McGregor, J. (2000). The staffroom is the most underused room in the school : a study exploring the influence of space and gender in teacher workplace cultures: paper presented at the BERA conference August 2000, UK. (Unpublished).
- National Education Policy Investigation. (1992). *Library and Information Services: Report of the NEPI Library and Information Services Research Group*. Cape Town: OUP/NECC.

Stadler, C. (1993). *School libraries in South Africa*. Durban: Education Policy Unit (Natal).

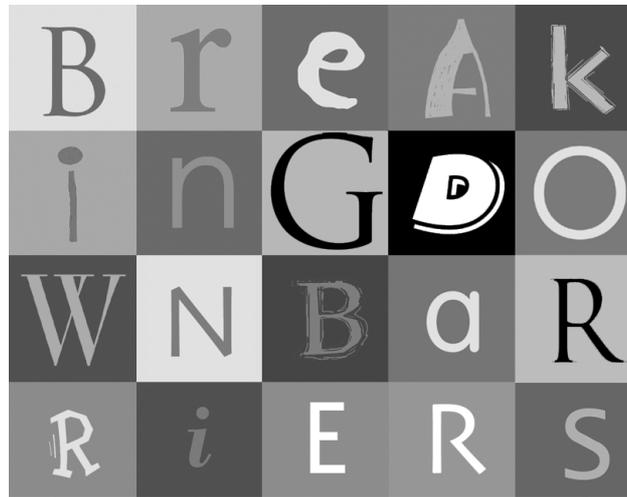
Teese, R. (1997). Reproduction theory. In *International encyclopedia of the sociology of education*. (pp. 92-7). Oxford: Pergamon.

Van der Merwe, A. & Faber, P. (Eds). (2003). *Group portrait South Africa: nine family histories*. Cape Town: Kwela Books.

Wettmark, L. (Ed). (2002). *To set the ball rolling, Library Project for Young Learners (LPYL): a Swedish-South African school library project 1997-2002*. Karlstad: Bibliotek i Samhalle.

Biographical Note

Jenni Karlsson has been involved in education policy formulation and analysis since 1991 and is currently director of the Education Policy Unit at the University of Natal. She was a member of the Department of Education's school library research group in 1996-7, which developed the Policy Framework for School Library Standards, and also played a key role throughout the Sweden-South Africa collaboration on the Library Practice for Young Learners project. She has written and published papers on libraries and related issues at various national and international forums, and will shortly complete her doctoral study on apartheid and post-apartheid discourses in school space. Karlsson@nu.ac.za



*Papers in the 7th International Forum
on Research in School Librarianship*

School Libraries in Pre-service Teacher Education**A Research Program Examining the Inclusion of School Libraries and Information Literacy in Pre-service Teacher Education from National and International Perspectives****Marlene Asselin**Associate Professor
Department of Language and Literacy Education
University of British Columbia
Canada

This paper describes a multi-stage research initiative focused on the place of school libraries in teacher education and how pre-service teachers learn to teach information literacy. Given the multinational agenda of governments and business of the creation for a knowledge-based society and economy, the research is premised on the prime opportunities of school libraries to support development of the skills and abilities essential to fulfilling these agendas by ensuring new teachers are informed and equipped to collaborate with teacher-librarians. Results and implications of one national study are given and the challenges of revising the research instruments for use in other countries are described and examples provided.

Around the world, school systems are responding to pronouncements by government and business about the urgent need to ensure citizens and workers are able to solve problems, think critically, collaborate, and use information and communication technologies to create knowledge. Since development of all these abilities is the mandate of school libraries (International Federation of Library Associations and Institutions, 2000), one would assume a central place of school libraries in education systems at all levels. However, there is little evidence that this is the case in Canadian public schools as indicated by severe budget cuts to school library programs and services, and to teacher-librarian positions (Doiron, 2003; National Library of Canada, 2002). What is not known is how new teachers are being prepared to carry out curricular expectations reflective of the 21st century.

This paper describes a research program that examines the place of school libraries in teacher education programs and specifically how pre-service teachers are learning to teach information literacy. The first phase of the research was conducted in Canada. The second stage is currently in progress and expands to other countries where Canadian instruments are being adjusted for use in specific international contexts. With prototypes of research instruments available from a variety of educational contexts, it is hoped that the third stage will be conducted in countries in all countries with IASL members. As in Canada, findings from each country could be used by the national school library community to inform advocacy initiatives with teacher educators.

Background to the Research Program

Three areas inform this research initiative focused on the place of school libraries in teacher education: current political agendas around the New Economy, current literacy theory and research, and current policies and reforms in pedagogy and teacher education.

Current Political Agendas: The New Economy

The advent of the Information Age raised the issue about the purposes and outcomes of the availability of an infinite amount of information. Many countries have responded with visions, policies, and plans for building knowledge-based economies and societies with the new tools engendered by information, communication, and multimedia technologies (Gee, Hull, & Lankshear, 1996). This new era of globalization, technology, and a view of knowledge as capital is referred to as New Times (Luke & Elkins, 1998) in the literacy field. In Canada, the federal document Canada's Innovation Strategy (2002) defines the goals and means of establishing the country as a competitor in a global network of knowledge-based economies. Three major conditions underscore plans to ensure Canadian success in the next decade of change and growth:

- An ever-increasing demand for a well educated and skilled workforce in all parts of the economy and in all parts of the country.
- A demographic crunch that will exacerbate these skills shortages.
- The need to strengthen the country's learning system to be able to meet the demands of the next decades (Government of Canada, 2002, pp. 7 – 8).

Emanating from these directives are descriptions of employability and workforce skills that will create and sustain Canada's position in the world's knowledge-based economy. One important target is to become one of the top five countries for research and development by 2010. It is not surprising that skills related to information literacy figure prominently in attaining current goals although these skills are not specifically labeled information literacy. For example, assuming a prominent place on the Conference Board of Canada's (2002) list of employability skills is "Manage information: locate, gather, and organize information using appropriate technology and information systems: access, analyze, and apply knowledge and skills from various disciplines."

Literacy Theory and Research in the 21st Century

The educational reform literature echoes the political and economic platforms of countries moving towards knowledge-based identities. Although not labelled as such, the essential message from this literature is that information literacy is a critical factor of survival. As Linda Darling-Hammond (1997) stated, "Never before has the success, perhaps even the survival, of nations and people been so tightly tied to their ability to learn" (p. 2).

Similarly, the new frontier in literacy research focuses on the convergence of literacy and technology in a knowledge-based economy. The Information Age has spawned new literacies necessary for accessing, gaining, transforming, and transmitting information (Gilster, 1997; Hull, 1997; Leu & Kinzer, 2000; Reinking, McKenna, Labbo & Kieffer, 1998). As economic, political, and cultural capital, literacy researchers are tackling the urgent task of ensuring students' proficiency of these new literacies. Projecting what literacy will consist of in New Times, Kibby (2000) connected the workplace to literacy in this way:

Like it or not the workplace is competitive, and the key to competitiveness will be gaining, transforming, and generating knowledge . . . future workplaces will require the full range of multi-literacies—most especially, analysis, synthesis, and evaluation of multiple pieces and forms of information" (p. 381).

Literacy researchers also write of the deitic nature of literacy (Leu, 2000) in this time of rapidly changing technologies. That is, unlike the past when the technologies of literacy were stable and what constituted effective literacy skills was consistent over long periods of time, the processes and skills necessary to represent and construct thinking (i.e. literacy) evolve interactively and in conjunction with seemingly daily technological advances.

Finally, literacy researchers emphasize the importance of attending to the deeper and more critical dimensions of information literacy and not to limit conceptions to technical skills of finding and using information. Instead, information literacy instruction must include "critical reflection on the nature of information itself, its technical infrastructure, and its social, cultural, and philosophical context and impact" (Shapiro & Hughes, 1996; see also Kaptizke, 2001 and Luke & Kaptizke, 2000).

Current Policy and Reform in Pedagogy and Teacher Education

In Canada, national agencies view education as “a lifelong learning process and (educators must) strive to create a learning society in which the acquisition, renewal, and use of knowledge are cherished” (Council of Ministers of Education, 1999). Proponents of media literacy also embed information literacy in their policy and curriculum documents (Media Awareness Network). Such vision statements enforce the national agenda that information literacy is the concern of all educators and one of the principal expectations that society has for future citizens. Across North America, information literacy figures prominently in current learning outcomes across multiple curricular areas (Western Canadian Protocol; Ministry of Education, 2000) and specifically in language arts (National Research Center on English Learning and Achievement, 2000; National Council of Teachers of English and the International Reading Association, 1996) and technology (International Society for Technology Education, 2000-2002). For example, one of the 12 IRA/NCTE standards for language arts is “use a variety of technological and informational resources to gather and synthesize information and to create and communicate knowledge.” Local school systems support these broad information literacy goals through more specific outcomes. In the province where I teach, two examples of language arts learning outcomes pertaining to information literacy are:

- Collect specific information from a variety of sources, including print, oral discussions, electronic media, and computer technology (grade 4)
- Identify viewpoints, opinions, stereotypes, and propaganda in literary, informational, and mass media communications (grade 7)

While professional organizations and some higher education institutions have recognized the need to include information literacy in the development of pre-service teachers, Carr (1998) reports that this integration has not taken place widely, in spite of there being several models for such integration that have worked well in some teacher preparation programs (Asselin & Lee, 2002). However, the pressure is growing as teacher education leaders call for renewal (Shapson, 1998). Renewal focuses on restructuring teaching to address issues around accountability and differentiated roles for teachers, as well as redesigning curriculum and instruction to promote and develop higher-order thinking skills and effective use of technology to increase knowledge (Hargreaves, 1995; National Commission on Teaching and America's Future, 1996; Stokes, Kaufman, & Lacey, 2002/2003).

The Canadian Study (2001 — 2002)

While the emergence of information literacy has been a major force in educational reform in both compulsory and post-secondary education, school library programs within many Faculties of Education in Canada have declined (Haycock, personal communication, February 26, 2003). There are still some courses offered in a few institutions, but unless the Faculty offers a diploma or graduate degree in school librarianship, most new teachers are unlikely to receive training or even exposure to the role that the teacher-librarian plays in developing an information literacy curriculum in partnership with classroom teachers. It could be that the traditional attention paid to the role of the school library and its instructional program that is led by a teacher-librarian may have been subsumed under other courses, but until this study, there was no evidence to support that assumption. Specific objectives of the Canadian study were:

- to examine the extent and character of the erosion of school library education in Canadian Faculties of Education;
- to identify alternatives that Faculties of Education may have found for including the role of the school library in pre-service programs; and
- to identify if and how Faculties of Education prepare pre-service educators for their role of developing information literate citizens.

Methodology

The research was conducted with a representative sample of Faculties of Education from across Canada. A stratified random sample of 17 teacher education programs from all regions of Canada was identified. The sample represented large programs (over 500 students), medium-sized programs (200- 499 students) and small programs (less than 200 students). Data collection was based on a questionnaire and telephone interviews to extend the questionnaire data.

For each institution, questionnaires were sent to the coordinators of the literacy and social studies methods courses, the practicum coordinator, and a library staff person with major responsibilities in the Faculty of Education. Thirty-eight percent (n = 26) of those surveyed, representing 16 of the 17 programs in the sample, completed a questionnaire. Telephone interviews lasting 30 minutes were conducted with nine volunteers drawn from those who had completed a questionnaire. For each of the three research objectives, data analysis utilized descriptive statistics and the constant-comparative method for identifying themes in questionnaire responses and telephone interviews.

Findings

The major finding was that school libraries are playing a limited role in the preparation of pre-service teachers. A complete report of the findings is available in Asselin & Doiron (in press). For this paper, a summary of results is provided below:

- There is a serious erosion of school library education in Faculties of Education. In most cases, participants reported that “the topic never comes up” and that “everyone assumes someone else is dealing with the matter.”
- Only weak or no alternative practices for introducing pre-service teachers to the role of the school library in their future teaching career exist. Pre-service teachers receive only cursory reference to the role of a school library and little or no practicum experience with school libraries when they get to the schools.
- Information literacy pedagogy is not explicitly developed in pre-service programs and there appears to be no expectations that pre-service teachers transfer the learning experiences in methods courses to their actual classroom practice. It is assumed that by completing assignments with a strong connection to information literacy learning outcomes, pre-service teachers will develop similar outcomes with their future students.
- Respondents to the questionnaires and the interviews repeatedly said that they had not considered the school library in any explicit way in their work with pre-service teachers and their participation in the study served as “a wake-up call.” They unanimously requested copies of the results of this study to share with their colleagues and they suggested we develop information packages and teaching strategies that could be included in the Faculty’s program.

Results showed that staff working in the Education libraries understand the concept of information literacy and its pervasive role in their daily work with students and faculty members. They could identify many areas where the need for information literacy was essential in the teacher education program and they were excited by some of the collaborative program ideas that were shared during the interviews. The librarians were actively seeking ways to connect their library programs with pre-service teachers’ learning and course instructional goals. In the words of one librarian, “we need to stop acting like academic libraries and start acting like school libraries.”

Conclusions

Beyond the information that was gained about the research objectives was the realization of the gap between teacher and school library educators’ understandings of the role of the school library in education. Findings indicated that those from the school library field speak a different language from those involved in teacher education, and by implication, from those in schools. As well, the extent that Faculties of Education have forgotten the role of the teacher-librarian and the value of school libraries in the educational system was alarming. Either much of what school libraries purport to contribute to education is already being done in other ways or the school library community had better start targeting teacher education programs as part of a national strategy to raise awareness and offer support to Faculties of Education trying to revitalize this all but forgotten part of education.

Given the value in modern educational policy and curriculum of attaining information literacy standards within the context of inquiry-based learning, integrated approaches to learning, and embedded use of information technology, the time is ripe for ensuring new teachers are informed about the leadership role school libraries play in these areas. There is little evidence that information literacy is given high priority in Canadian schools, despite known requirements of the knowledge-based economy and the inclusion of information literacy in desired characteristics of Canadian employees. This trend will continue if new teachers remain unequipped to teach information literacy through collaboration in effective school library programs.

The Canadian school library community needs to reposition its role in light of significant developments in wider educational reform and in teacher education programs and start to include new teachers in professional development activities. Teacher-librarians need to seek out opportunities to have a pre-service teacher do a practicum in the school library. They need to meet with all pre-service teachers when they start their practicum and show them how school libraries can advance student achievement and add creative energy to their classroom programs. Professional organizations of teacher-librarians need to collaborate with teacher educators to provide pre-service teachers with authentic information literacy lesson planning experiences as part of their required coursework (Asselin & Lee, 2002).

Those working in Faculty of Education Resource Libraries offer promise in modeling the role of the teacher-librarian in Faculty of Education programs. Examples related during the interviews of how a qualified librarian working in an academic library can collaborate with Faculty members and students to integrate resources and create exciting learning experiences need to be shared. While the challenges are great, this study has begun to point the Canadian school library field towards effective ways of reinventing teacher preparation.

The International Pilot Studies (2003 — 2004)

Four countries with IASL membership are participating in this stage of the research program: Australia, New Zealand, South Africa, and China (Hong Kong). At this time (February 2003), the questionnaires and interviews are being adjusted to more accurately represent the structures and language used in particular national contexts in preparation for use in data collection from small samples in participating countries. I contacted key people in teacher education in each of the four countries and sought their participation. They in turn identify “key informants” within their institutions to review the instruments. Instruments are revised according to feedback and then emailed to the contact person at each institution. The questionnaires are then distributed to representatives of the three groups (teacher educator, practicum director, library staff) who return completed forms by email to the researcher. Follow up interviews are conducted by email.

What is becoming apparent through this revision process is that despite globalization, education remains a local matter as well. For example, in one institution in one of the participating countries, the teacher education program includes only secondary teachers and students specialize in subject areas rather than take a generalist program of many required curricular areas. One respondent commented that the idea of a pre-service teacher spending some of their practicum time in a school library is unheard of in their institution but found the question important to ask nonetheless as it raises the issue of why this is not done. Informants have also clarified terminology (e.g. “information literacy” vs “information skills”; “subject” vs “course”) and extended both the questionnaire items and interview questions to enable more valid and consequently useful responses. For example, a question has been added to the teacher educator instrument about their view of the role of the teacher-librarian and one to the library staff instrument requesting any additional information (e.g. brochures, web pages) about their programs and services with faculty and pre-service teachers. Respondents have suggested ways of sharpening the interview questions as well as making them more objective. Appendix A provides an example of the library staff questionnaire currently under revision, and Appendix B contains a version of the interview questions that will be asked to representatives of each group.

At this early stage of the international extension, it is clear that many of the same factors that make comparing information literacy progress within and between nations difficult also make studying how pre-service teachers learn to teach information literacy challenging. Moore (2003) reviews the problems of comparative information literacy research and below I list parallel challenges in my research program.

- The inclusion and importance of information literacy in compulsory schooling policy and prescribed learning outcomes. The degree of fit between K – 12 curricular expectations and teacher education programs must be considered.
- The availability of resources in both K – 12 schools and libraries or resource centres in teacher education programs. The extent to which information literacy instruction can be effectively planned and carried out will be affected by the range and quality of types and formats of information sources. This includes access to information and communication technologies which varies widely even within school districts.

- The pedagogical approach to information literacy that is taken in K – 12 schools which can range from bibliographic and technical to cognitive and metacognitive. Teacher educators who include information literacy instruction in their courses will likely reinforce approaches observed in the schools.
- The “personnel infrastructure” of information literacy that includes a) teacher educators’ and pre-service teachers’ own
- The “systematic infrastructure” of information literacy in schools particularly in a school wide culture of an inquiry-based constructivist view of teaching and learning, collaboration, and actual time and opportunities to collaboratively plan and teach information literacy.

While the pilot studies will form the basis of further investigation to participating countries’ teacher education programs, it seems clear that each IASL country should take ownership of the process of adapting the research instruments to their unique contexts. Findings must take into consideration the five complex factors described above and be seen as only one more source of information directing a multi-faceted action plan to work with both pre-service and in-service teachers in realizing the national agenda to participate and compete in a global world of knowledge-based societies and economies. It is time to seriously respond to the call to position school libraries in teacher education programs (American Library Association Presidential Committee on Information Literacy, 1989) as a critical component of preparing teachers for their work in New Times. In this way, the international mission of school libraries may be finally realized:

The school library provides information and ideas that are fundamental to functioning successfully in today’s information and knowledge-based society. The school library equips students with life-long learning skills and develops the imagination, enabling them to live as responsible citizens. The school library offers learning services, books and resources that enable all members of the school community to become critical thinkers and effective users of information in all formats and media (International Federation of Library Associations and Institutions, 2000).

References

American Library Association Presidential Committee on Information Literacy. (1989). Final report. (ERIC Document Reproduction Service No. ED 315074). Retrieved March 1, 2003 from <http://www.infolit.org/documents/89Report.htm>

Asselin, M. & Doiron, R. (in press). An analysis of the inclusion of school library programs and services in the preparation of pre-service teachers in Canadian universities. *Behavioral and Social Sciences Librarian*.

Asselin, M. & Lee, E. (2002). I wish someone had taught me: Information literacy in a teacher education program. *Teacher Librarian*, 30(2), 10 – 17.

Carr, Jo Ann. (1998). *Information literacy and teacher education*. (ED424231) ERIC Clearinghouse on Teaching and Teacher Education, Washington DC. Retrieved January 25, 2003 from <http://www.ericfacility.net/ericdigests/ed424231.html>

Conference Board of Canada, 2000. *Employability Skills 2000+*. Retrieved February 28, 2003 from www2.conferenceboard.ca/education/learning-tools/employability-skills.htm

Council of Ministers of Education, Canada (1999). Shared priorities in education at the dawn of the 21st century: *Future directions for The Council of Ministers of Education, Canada*. Retrieved January 27, 2003 from <http://www.cmec.ca/reports/victoria99.en.stm>

Darling-Hammond, L. (1997). *The right to learn: A blueprint for creating schools that work*. San Francisco: Jossey-Bass.

Doiron, R. (2003). *Forging a future for Nova Scotia school libraries*. Halifax, Nova Scotia: Nova Scotia Teachers’ Union.

- Gee, J.P., Hull, G., Lankshear, C. (1996). *The new work order: Behind the language of the new capitalism*. Sydney & Boulder, CO: Allen, Unwin & Westview Press.
- Gilster, P. (1997). *Digital Literacy*. New York: John Wiley.
- Government of Canada (2002). *Canada's Innovation Strategy*. Retrieved February 22, 2003 from <http://www.innovationstrategy.gc.ca>
- Government of Canada (2002). *Knowledge matters: Skills and learning for Canadians*. Retrieved February 28, 2003 from <http://www.hrdc-drhc.gc.ca/sp-ps/sl-ca/doc/report.shtml>
- Hargreaves, A. (1995). *Changing teachers, changing times: Teachers' work and culture in the postmodern age*. New York, NY: Teachers' College Press.
- Hull, G. (Ed.) (1997). *Changing work, changing literacies*. Albany, NY: State University of New York Press.
- International Federation of Library Associations and Institutions (2000). IFLA/UNESCO School Library Manifesto: The School Library in Teaching and Learning for All. Retrieved March 1, 2003 from <http://www.ifla.org/VII/s11/pubs/manifest.htm>
- International Society for Technology Education (2000-2002). *National Educational Technology Standards*. Retrieved January 28 2003 from <http://cnets.iste.org/>
- Kapitzke, C. (2001). *Information literacy: The changing library*. *Journal of Adolescent & Adult Literacy*, 44(5). Retrieved March 3, 2003 from http://www.readingonline.org/electronic/elec_index.asp?HREF=/electronic/jaal/02-01_Column/index.html
- Kibby, M.W. (2000). What will be the demands of literacy in the workplace in the next millennium? *Reading Research Quarterly*, 35(3), 378 – 383.
- Leu, D. (2000). Literacy and technology: Deictic consequences for literacy education in an Information Age. In Kamil, M.L, Mosenthal, P.B., Pearson, P.D., & Barr, R. (Eds), *Handbook of Reading Research, Vol II* (pp. 743-770). Newark, DE: International Reading Association.
- Leu, D. & Kinzer, C. (2000). The convergence of literacy instruction with networked technologies for information and communication. *Reading Research Quarterly*, 35(1), 108-127.
- Luke, A. & Elkins, J. (1998). Reinventing literacy in "New Times." *Journal of Adolescent and Adult Literacy*, 42(1), 4-7.
- Luke, A., & Kapitzke, C. (2000). Literacies and libraries: Archives and cybraries. *Pedagogy, Culture & Society*, 7, 467-491.
- Media Awareness Network*. Retrieved January 27 2003 from <http://www.media-awareness.ca/eng/>
- Ministry of Education, Government of British Columbia (2000). *The critical skills required of the Canadian workforce*. Retrieved February 28, 2003 from <http://www.bced.gov.bc.ca/careers/planning/work/critskill.htm>
- Moore, P. (2003). *Bridging the chasm: K – 12 education for information literacy despite the digital divide(s)*. A paper prepared for the Information Literacy Meeting of Experts, Prague, Czech Republic, Spring 2003.
- National Research Center on English Learning and Achievement (2000). *Non-print media and technology standards for K – 12 teaching and learning*. Retrieved March 1, 2003 from <http://cela.albany.edu/standards/index.html>

National Commission on Teaching and America's Future (1996). *What matters most: Teaching for America's future: Report of the National Commission on Teaching and America's Future*. Retrieved January 27 2003 from <http://www.nctaf.org/publications/WhatMattersMost.pdf>

National Council of Teachers of English and the International Reading Association (1996). *Standards for the English Language Arts*. Retrieved December 19, 2003 from <http://www.ncte.org/standards/standards.shtml>

National Library of Canada (2002). *Elementary and secondary schools: The role, challenges and financial conditions of school and school library resources in Canada*. Retrieved March 3, 2003 from <http://www.nlcbnc.ca/publications/14/index-e.html>

Reinking, D., McKenna, M.C., Labbo, L.D. & Kiefer, B. (1998). *Handbook of literacy and technology: Transformations in a post-typographic world*. Mahwah, NJ: Erlbaum.

Shapiro, J.J. & Hughes, S.K. (1996). Information literacy as a liberal art: Enlightenment proposals for a new curriculum. *Educom Review*, 31 (2). Retrieved May 3 2002 from <http://www.educause.edu/pub/er/review/reviewArticles/31231.html>

Shapson, S.M. (1998). Teacher education at a turning point. *Orbit*, 29(2), 10 – 14.

Stokes, S.M., Kaufman, T.U., & Lacey, A. (2002/2003, December/January). Preparing teachers of the 21st century: Creating technological literacy in a teacher education program. *Reading Online*, 6(5). Retrieved January 27 2003 from http://www.readingonline.org/articles/art_index.asp?HREF=stokes/index.html

Western Canadian Protocol for Collaboration in Education: Common Curriculum Framework. Retrieved January 26 2003 from <http://www.wcp.ca/>

Biographical Note

Marlene Asselin is an Associate Professor in the Department of Language and Literacy Education at the University of British Columbia. Her research interests are literacy education, information literacy, and school librarianship. She teaches literacy and literature courses in the teacher education program and in the literacy and teacher-librarianship graduate programs. She is President-Elect of the Canadian Library Association and will be President in June 2003. This research is supported by the University of British Columbia's HSS-Hampton Funds and the International Association of School Librarianship (Takeshi Murosushi Research Award, 2002).

Appendix A

Draft of Library Staff Questionnaire

Draft of Library Staff Questionnaire

1. What special programs or services does your library offer to pre-service teachers?
 - a) _____
 - b) _____
 - c) _____
2. What does information literacy mean to you?

3. In what ways does your library program helps pre-service teachers increase their own information literacy skills?
 - a) _____
 - b) _____
 - c) _____
4. Does your library offer any programs or services aimed to help pre-service teachers learn to teach information literacy to school students?
No _____ Yes _____

If "Yes", please list below.

- a) _____
- b) _____
- c) _____

NOTE: For all the above questions, please submit any additional materials such as brochures or reference to a web page identifying and explaining your library's programs and services concerning pre-service teacher education and information literacy.

5. What do you see as the greatest challenge(s) to equipping new teachers to teach information literacy to school students?
 - a) _____
 - b) _____
 - c) _____
6. What role(s) do you see your library playing in to the challenges listed in question 4?
 - a) _____
 - b) _____
 - c) _____
7. What is your title in the library?

8. Please provide basic information about your role. If you have a job description, please attach it to this question.

As you know, questionnaires are a valuable way of obtaining general information on topics. However, it is also very valuable to a research project if the researchers can communicate directly with respondents in order to clarify and expand some areas.

I would be very grateful if you would allow me to contact you by email to obtain your permission for a brief interview. This will in no way compromise your anonymity, as all data will be aggregated, and all personal information will be destroyed. If you would be willing to have me contact you, please complete the information below or phone me at () so that I may give you further information about this interview.

Name: _____
Phone: () _____
E-Mail: _____

9. Is there anything you would like to add?
No _____ Yes _____

If "Yes", please do so in the space provided below.

Thank you for your participation in this research survey.

Appendix B

Draft of (Email) Interview Questions based on Reviewers

Dear Participant;

I thought you might appreciate receiving beforehand a copy of the questions I will be asking during our up-coming email interview. The six questions cover several key areas I am probing in this study and they offer you a chance to comment on these issues.

1. In (name of country), as in many countries, political visions and descriptions of workforce skills stress the importance of being able to access, analyze, synthesize and evaluate multiple pieces and forms of information. These skills fall under the concept of information literacy and include learning to use information for a variety of critical thinking activities.
 - a. What does information literacy mean to you?
 - b. Do you agree with its projected importance in the workplace?
 - c. How is the concept of information literacy influencing your teaching methods or program area?
2. An examination of a school system's curriculum shows that information literacy learning outcomes are embedded in the areas of literacy, technology, and content areas like social sciences and science. How do you see the role of the school library in supporting these information literacy outcomes in the school curriculum?
3. What qualifications should people hired to run school libraries have?
4. In a recent study of Canadian teacher education programs, I found that school libraries do not have a significant role in pre-service education. No one in most Canadian Faculties has responsibility for school libraries and courses in this area have been dropped.
 - a. What do you know about the situation in your teacher education program?
 - b. What do you think is the impact it is having on preparing new teachers?
5. What are your opinions about the future of school libraries in your country?
6. What actions, if any, do you see your School or College of Education taking in supporting the role of school libraries in the classrooms of the future?

In all cases there are short follow-up questions that build on your initial response. Please don't feel you need to prepare answers beforehand; these are merely provided as a courtesy before we have our conversation.

Thank you again for your continued support. I look forward to discussing these issues with you soon.

Lois BarranoikPhD Candidate, Department of Elementary Education
University of Alberta
Canada

This study explored what students view as meaningful in a curriculum-based research project. A participatory action research approach was used to investigate the experiences of one classroom teacher and nine students while completing a curriculum-based research project in a senior level high school English course. The design of the research project was based upon the students' shared definition and understanding about what comprised a 'meaningful' assignment. Choice, relevance, reflection and application were considered essential components by the students. Feelings played a primary role in the choices made and significantly influenced student learning and project completion.

Introduction

How do senior level high school students view their school experience in general, and their research experience in particular? One student reflected,

It just scared me, the fact that nothing really stands out, like I don't remember ever learning something that I felt like "oh wow, this is totally cool." ... that nothing's really memorable about junior high or high school. Like I don't remember anything really striking and neat.

Another student mused,

The last time I remember doing a research project was in elementary school. I just remember because they want to get you into the library when you're a little kid. Once you get to junior high and high school it's more structured. It's like the teacher has this curriculum and they teach you that.

In my practice as a teacher-librarian, I have observed that many young people do not have a positive view of their school experience and especially dislike completing research projects. They do not consider information as valuable to themselves. Because their topics are assigned rather than chosen, their use of information is simply seen as 'important to the task at hand' rather than a fundamental way to enhance and increase their own knowledge base. Therefore, when educators design research projects, it is necessary to not only address curricular requirements and information skills, but to also consider what is meaningful and relevant to students.

Prior research in this area has addressed the importance of both cognition and affect in the information search process (Kuhlthau, 1993) and the value of motivational strategies to enhance instruction in information literacy and research (Small, 1999; Small & Arnone, 2000). However, student experience still needs to be examined more deeply: what do students view as meaningful in a research project? It is important to hear the voice of students since their formal school experiences strongly influence their adult engagement with literacy, and adults' alienation from literacy activities has economic, social and political costs.

The following questions guided this research:

- What do high school students view as meaningful in curriculum-based research projects?
- How can teachers and teacher-librarians design and carry out curriculum-based research projects that are viewed as meaningful by students?

For this study, curriculum-based research projects were defined as assignments based on subject-specific course content requiring individual study and investigation through the use of multiple resources, resulting in a final product to be shared with both peers and teacher.

Review of the Literature

Literature from three areas provides a grounding for this study: constructivist theory, information search process, and effective research assignments. These three areas provide an overview of the various components contributing to meaning-making in research projects and assist with understanding what is meaningful from the students' perspective.

Constructivist approaches to education, in contrast to traditional transmission models, are seen as assisting with increased understanding, with supporting learners in making meaning for themselves. This view of learning proposes that students develop personal understanding when confronted with new ideas and/or new experiences through interaction with their environment. Dewey (1938) stated "that there is an intimate and necessary relation between the processes of actual experience and education" (p. 20). In other words, students must experience in order to learn. The constructivist theory of Dewey (1933), Kelly (1963), Bruner (1973), and Vygotsky (1978) is the foundation of Kuhlthau's uncertainty principle and information search process model. One aspect of Kuhlthau's uncertainty theory is the interest corollary which holds that the learner's interest increases as uncertainty decreases. "Motivation and intellectual engagement intensify along with construction" (Kuhlthau, 1993, p. 122). The research process therefore, is a process of construction and meaning-making. Dervin (1989), a communication scholar, also viewed information seeking as sense-making, "as personal creating of sense" (p. 5). An emphasis on understanding and the creation of personal sense will make both the research process and the information gleaned through this process more meaningful to the student (Kuhlthau, 1998). The importance of making learning meaningful and relevant to students is reflected in current curricular reform initiatives (Hartzell, 2001).

A common assumption about research assignments is that they help the students learn the course content and develop new understanding related to their studies. However, effective research assignments must do more. They must meet the goals of the curriculum, encourage new learning, have current significance for the students and prepare them for their future. The professional literature in library and information studies and in education identifies key elements in effective assignments. A discussion of each element follows:

Understanding the research process

Students need to understand what is included in the information search process prior to beginning research projects. Different information search models adequately identify the steps involved in the information search process: topic selection, information location, information use, and product creation. However, the format of the models is often linear (see, for example, Irving, 1985; Stripling & Pitts, 1988; Eisenberg & Berkowitz, 1990; Joyce & Tallman, 1997). The implication of a linear model is that the research process is also linear and follows a sequential order of steps. Unfortunately, when teachers and teacher-librarians do not completely understand the information search process themselves, they may mislead students regarding the nature of the research process resulting in both student and teacher frustration when expectations for the project are not met. Part of this process includes learning to select the most useful and appropriate information for a particular topic. Therefore, information search skills need to be taught within a relevant and meaningful context (Todd, 1995).

Comprehending the subject area

Students need a clear understanding of the area to be researched. When teachers provide a clear explanation of the curricular area, the students feel more comfortable with the curriculum-based research project. In fact, Thomas (1999) indicated "that specific research topics ought not to be selected until information on the general topic has been obtained or an overview of the subject has set the stage for the information-seeking tasks that are to follow" (p. 108).

Asking an authentic question based on personal topic choice

Asking authentic questions is of utmost importance (Wehlage & Smith, 1992; MacKenzie, 1999). Part of topic selection involves composing a question about a new idea in order to explore an unfamiliar or different area. Authentic questions require “students to actively produce, rather than reproduce, knowledge” (Wehlage & Smith, 1992, p. 111). Students who own their learning must own their questions (Donham, Bishop, Kuhlthau & Oberg, 2001).

Enhancing cognitive development

It is also important to design learning activities that require mental development; “good learning is that which is in advance of development” (Bruner, 1986, p. 73). In order for students to learn, it is necessary to design and promote activities that build on past experience and understanding while being ahead of the students’ developmental stage. This will set “in motion a variety of developmental processes that would be impossible apart from learning” (Vygotsky, 1978, p. 90).

Balancing process and product

Students also need to understand that process and product comprise the research project and that one is not more important than the other. In a qualitative study conducted by McGregor (1995), a relationship between the complexity of students’ thinking and their orientation to either research process or product was identified. “The students who evidenced some process orientation showed more involvement in a process of making sense for themselves, of transferring information into long-term memory” (McGregor, 1995, p. 32). Another study interested in finding the students’ point-of-view and concerned with identifying elements associated with meaningful research tasks found process instruction to be very important to the students and one of five elements related to satisfaction with the research process (Garland, 1995). These students also identified choice of topic, group work, and clarity of goals and means of evaluation, as related to satisfaction with both the research process and their achievement.

Promoting relevance and meaning

Research assignments should be currently relevant to the life of the students both inside and outside of school. “Acknowledging students’ histories, the stories that inform their lives, and weaving such information into webs of meaning that link the everyday with the academic is a powerful way to make knowledge meaningful” (Giroux, 1999, p. 35). Another way to make research projects relevant to everyday life is using the tools and techniques of popular culture. Beaudoin (1998) stated that “popular culture is a major meaning-making system” (p. xiv). Therefore, it may be beneficial for students to have the opportunity to master the skills and technology of popular culture. Students often become so involved with the production of a final electronic product that the actual research process is seen as an important and valued means to an end, rather than an activity to be endured.

Receiving evaluation

Students want to know how they are being assessed (Garland, 1995). Part of the pay-off for students should be in the form of increased understanding and not merely the final grade for the project. “Where grades are used as a substitute for the reward of understanding, it may well be that learning will cease as soon as grades are no longer given – at graduation” (Bruner, 1973, p. 423).

Being part of the research community

The idea of the literate community is applicable to what I am calling the ‘research community.’ It is essential that students be given the opportunity to practice being a ‘researcher’ with teachers and teacher-librarians. This is a powerful way to help students become researchers and develop their ability to derive meaning from the information obtained while conducting research. However, teachers and teacher-librarians must feel comfortable with the research process, and they “must realize that inquiry takes time, it is messy, and the work must be performed by the students themselves. Teachers cannot carry out the process of inquiry for the students, although they can support and facilitate that process.” (Stripling, 1995, p. 9)

This process support and facilitation by the teachers and teacher-librarians is best accomplished through understanding intervention as defined by Kuhlthau (1993).

It is evident from the discussion of the literature that the 'students who do the talking and the doing do the learning.' Although it is important for students to understand the accomplishments of the past, it is also necessary for them to continually explore new ideas to ensure both individual and societal growth and development. Students need to construct or create new ideas, not merely acquire facts for the purpose of reproduction.

Methodology

Setting

The research in this study took place in a large urban school for fourth and fifth year high school students located in Canada. The school was in its fifth year of operation since opening in September 1997, and attracted students from districts both in and around the urban centre. The student population was approximately 2300 both semesters. Total high school credits held by these students ranged from less than sixty to over one hundred. (Students with a high school diploma have at least 100 credits in the subjects required by the provincial government.) Approximately one-third of the students already had their high school diploma and were simply upgrading. Another one-third needed a few courses to get their diploma, and the last one-third had less than 60 credits and were considered at-risk. Eighty-five percent of these students worked part-time and many lived independently.

Data Collection and Analysis

Over a three-month period in 2002, a participatory action research approach was used to investigate the experiences of one classroom teacher and nine students while completing a curriculum-based research project in a senior level high school English course. The teacher pointed out that this self-selected group of students, five female and four male, comprised a good cross-section of the class. My role as a researcher was that of participant-observer (Boostrom, 1994) and facilitator.

The study provided a forum for discussion by students, teacher and researcher about the research process and the construction of meaning. Data were collected through audiotaped semi-structured interviews, observation field notes and conversations held in co-operative inquiry groups (Baldwin, 2001). Since interpretation is a very real part of conversation, hermeneutics, particularly moderate hermeneutics (Gadamer, 1975), was essential to this study.

Data analysis was ongoing throughout the study. Analysis and reflection on the data and processes provided the basis for replanning, acting and observing, and reflecting, the steps common to action research (Carson, Connors, Ripley & Smits, 1989). Since the aim of the action research participants was to identify what is meaningful and to increase understanding, it was important that the analysis completed by the researcher be understood and used by those involved in the study. Discussions were taped and transcribed for each session until we reached a shared understanding of 'meaningful' assignments (Gallagher, 1992). We then translated our understanding into a curriculum-based research project for the students.

Although weekly discussions regarding the implementation of the new ideas were planned, I became aware that it was more productive to meet as *issues arose*, rather than on a set schedule. This part of the methodological evolutionary process required flexibility and a willingness to 'let go'.

Findings

Defining Meaningful Assignments

How students construct personal meaning and what they consider 'meaningful' and/or 'not meaningful' when completing a research project became more evident through this exploration. Individual student and teacher participant interviews were audiotaped and transcribed. Transcripts were reviewed to find all references to 'meaningful.' These references were highlighted and categorized. The categories identified for 'meaningful' assignments and sample participant responses follow:

- Choice: *"...that is really meaningful to you if it's yours"*
- Can relate to it: *"...it's something that you can relate to"*
- Previous experience: *"you can take what you already know and build on it"*
- Present personal opinions: *"...it's important that you get to put a little piece of your own opinions ... into it because if you don't then you're just regurgitating facts and that's not meaningful"*
- Something that makes you think a lot: *"... it has to be something that will make me think a lot"*
- Helps you understand the way the world is: *"... because there's lots of points of view being thrown out and you get to look at things in a new light all the time"*
- Increases understanding of self: *"...it should be about getting to know yourself"*

What was considered '**not** meaningful' was also identified during the initial participant interviews. One participant suggested that "[in] junior high and high school we took notes and we read textbooks and that's it, and I didn't learn. I mean I memorized and that's it and I didn't really take anything out of it." Following this line of thought was another comment indicating "I don't remember anything I've ever written down on a worksheet." One student stated "Why regurgitate something that somebody else wrote that doesn't teach you anything?" Multiple choice tests, memorization, regurgitating facts, and completing worksheets were most often identified as school activities that are **not** meaningful to students.

As the participants were interviewed, they were given their transcripts to read and initial. Once the students had positively verified the interpretation of their interview, all ideas for 'meaningful' assignments were compiled and displayed on a large chart (Miles & Huberman, 1994). The discussion chart was organized in the following manner:

1. What meaningful assignments include
2. Activities that are course-related, interesting and help with learning
3. Activities that are not meaningful

This discussion chart formed the basis for our initial co-operative inquiry group discussions. At times the discussion became philosophical, rather idealistic and insightful. One participant suggested;

All these things tie in together because something that makes you think a lot will help you understand the way the world is and it'll increase your understanding of the way you are ... so use your previous experiences and, of course, you'll relate to it and you'll choose something that you're interested in.

Another participant commented;

I think that if you look at black and white, then you can't understand why people do the things that they do for the reasons that they have. So if you kinda have a broader understanding then you understand others and you understand yourself.

After much discussion by the student participants and the teacher, numerous definitions regarding 'meaningful' assignments were generated and recorded. All of the ideas were then combined into one complete definition:

Meaningful assignments are open-ended, thereby allowing for choice, personal interest and the expression of personal opinions, while encouraging thought and decision-making about the world and yourself.

The students agreed that this definition captured their ideas regarding 'meaningful' assignments and that the design of the curriculum-based research assignment in their English class should be based on the definition.

Further discussion and analysis revealed that the agreed upon definition was comprised of four components: **choice, relevance, reflection** and **application**. A discussion of the findings for these components follows.

Choice: Being given choice was very important to the student participants. However, the definition of choice varied considerably and indicated a range in sophistication of thought and understanding. One student believed that it should include the choice of the book to read as well as the topic (i.e., "we got a choice on like the topic but we actually didn't get a choice on like [the book]"). At the other end of the continuum, another student felt that being allowed to express personal opinion provided sufficient options since a variation in perspective ensured that there was choice in the expression of ideas. Although the students' understanding about what constitutes **choice** varied, the final consensus was that choice was an essential part of 'meaningful' assignments. One student summarized this in the following manner: "Like, if you choose what you get to do, it's meaningful to you and you can do what you want. Obviously you wouldn't choose something you didn't want to do. Yeah, that's pretty much it."

Relevance: Student participants indicated that 'meaningful' assignments needed to be currently relevant to their life both inside and outside school. Ideas for discussion and/or research need to be "things that I can actually relate to in life" and topics that actually have "something to do with you" and that help with understanding "the way the world is." Students believed that a 'meaningful' assignment "makes you think right away and understand it because you're put in that situation." One student believed that a 'meaningful' assignment "also affects you in real life. I mean outside the classroom, it's something that you could take outside the classroom."

A common complaint about school expressed by the students was that "it's so distant and like when am I ever going to use this and why should I care? Like it has nothing to do with me." This belief in the importance of relevance appeared to be based upon student understanding that the goal of schooling should be about getting to know yourself better. One student suggested that school should provide an opportunity for you to learn and grow as a person. Another student felt that "school should be about getting to know yourself and what you're good at, and what you want to do." Therefore, based on the understanding demonstrated by the students, **relevance** is integral to 'meaningful' assignments as defined by the participants of this study.

Reflection: Student participants believed that being allowed to express personal opinion(s) in an assignment increased personal meaning but they also required time for contemplation and deliberation. Part of this reflection process, based on student suggestion, involved having two 10 to 15 minute blocks of class time per week for students to discuss their choice of topics and possible perspectives with other group members. This was considered valuable because it was "going to force people to make sure that when they're looking at an issue that they're looking at all sides of the issue" and was incorporated into the project after a recommendation was made in one of the co-operative inquiry group sessions. One student remarked, "I think if you talk about your issues I think a lot of people are going to be opened up to a lot of things that they didn't think about putting in their paper." Hearing the perspectives of other students was considered essential and contributed to the construction of personal meaning. According to the input provided by the student participants, **reflection** requires adequate time to think, cannot happen in a vacuum, and is elemental to 'meaningful' assignments.

Application: Although making application to personal lives is an extension of relevance and encourages personal construction of meaning, student participants indicated that before applying what had been learned to themselves, they had to be given the time to reflect and ascertain what was significant for them. One student suggested that "to really learn something you have to take something, a topic or whatever, that's got sides to it, roll it around in your head, look at the different perspectives and figure out from that what your place is." Another student indicated;

I think maybe before the project, and I think possibly maybe other students as well, didn't, may have felt that it would not affect them in real life or affect them themselves out of the classroom. But I was amazed how afterwards or during the process of research, it very slowly changes you ... to gain different perspectives and ... a better understanding.

The same student then went on to elaborate that “years from now I’ll still remember doing this project and be able to pertain things in life to it.” It would appear that for some students, personal application does not necessarily end upon completion of the project. It is ongoing and, as such, basic to the construction of knowledge and meaning.

Developing the Research Assignment

Once the students had reached an agreement about the definition for ‘meaningful’ and about what constituted a ‘meaningful’ assignment, the teacher and the researcher created an assignment based on the definition. It was especially important to incorporate all the identified components into the assignment to ensure that the students’ ideas and thoughts were formally acknowledged and that the student participants felt valued. A copy of the curriculum-based research assignment follows:

English Research Assignment

1. Choose an issue of interest to you that is found in *The Great Gatsby*. You will need to read the book carefully and, perhaps more than once, in order to do this.
2. Begin collecting various pieces of information about that issue. Sources may include dictionaries, quotations online or in print, encyclopedias, magazines, newspapers, and interviews as well as the book itself.
3. Focus on one aspect of the issue in order to write your thesis statement.
4. Your final product is a research paper of approximately 1000 to 1500 words typed (4 to 6 pages) that covers the following:
 - Introduction to the issue
 - Discussion and examples from the novel
 - Discussion and examples from current life
 - Personal opinion about the issue
 - Conclusion

The assignment was introduced to the class and the students were encouraged to ask questions and/or make suggestions. During the second round of co-operative inquiry group discussions, one student participant remarked, “Actually everything is very good. You have prepared it [the assignment] very well for us.” Another stated, “Well from what I read, it’s exactly what we talked about.” Students indicated that the curriculum-based research project designed and based on their definition was, indeed, ‘meaningful’ because they were allowed choice, encouraged to express personal opinions, and focused on relevance through locating current examples for their area of interest. They were also given time to think and reflect on their learning.

Feelings and Meaningful Assignments

Student participants made over 400 references to feelings, both positive and negative, during co-operative inquiry group discussions and interviews. Although there were more positive than negative feelings, it became apparent that students experienced an emotional reaction to the assignment and freely expressed this.

Slightly more expressions of feelings, both positive and negative, were associated with the process, rather than with the product and/or content. Eight of the nine participating students indicated that they lacked prior experience and were uncomfortable, as well as unsure, about the process of research. Since prior experience contributes to feelings of confidence with process, it was not surprising that initially students were more concerned with the “how,” than with the final product. This confirms the importance of discussing and identifying feelings throughout research (Kuhlthau, 1993) and identifies the immense influence feelings have upon cognition (Damasio, 1994).

Personal feelings played a primary role in the choices made. For example, students commented on the necessity “to do something that affects me personally and something that I can write on passionately,” the importance of doing something that “was deep and profound and really interesting,” and the idea that “if it appeals to you, you’ll learn about it.” One student also discussed the positive feelings that come with the reassurance that “a lot of people think like I do.” Another student participant, pleased with the assignment design, commented about the importance of personal opinion. He said “Well, I got to write about something that I was able to speak out against, you know. I could actually put my personal opinion in there and I could actually say what I felt, instead of what the teacher wants to know.” More than one student indicated that being given choice and choosing a topic of personal interest helped to make the process of writing and assignment completion easier.

Discussion

Defining Meaningful Assignments

The first interview with student participants asked about course-related activities that were most interesting to them as well as what makes an assignment meaningful to them. All assignments contain activities, but not all activities are part of an assignment. Asking about activities helped to set the context, opened up the inquiry process and provided indications of the students’ preferred learning styles. The discussion about classroom activities helped to not only clarify what the student participants considered interesting, but also assisted with the design of the curriculum-based research project. Knowledge about what classroom activities the students considered ‘meaningful’ and ‘not meaningful’ ensured the use of those activities viewed positively by the student participants. As outlined in the findings, choice, relevance, reflection and application were identified as essential to the composition of ‘meaningful’ assignments.

Choice: Student participants in this study considered choice to be of utmost importance when completing a curriculum-based research project. When students were allowed choice, they began to feel that they were able to pursue a topic of interest to them and began to feel more control. Positive feelings about the curriculum-based research project accompanied choice (Garland, 1995). Allowing choice may initially seem risky but, as with any new foray into unfamiliar territory, the end result is often worth the uncomfortable beginning. Students want to be given choice (Smith & Wilhelm, 2002). One student suggested that choosing something “passionate to me” was paramount. Once the choice had been made, everything else seemed to “come to me nicely.” As indicated in Kuhlthau’s (1993) Information Search Process Model, once a focus has been formed, feelings of clarity and confidence follow, and the students can more easily identify relevant information.

Relevance: Student participants stated that ‘meaningful’ assignments were those with current relevance to all their life experiences. Linking the “everyday with the academic” (Giroux, 1999, p. 35) is an effective way to make learning meaningful. One student displayed a positive attitude towards research but suggested “It’s just some of the stuff they make you research, it’s like, well what the heck.” In a study of secondary student perceptions of class activities, Gentry and Springer (2002) recognized that “classroom activities that are practical and related to the students’ daily lives facilitate connections and learning” (p. 194) and contribute to the construction of personal meaning. Garland (1995) found that student satisfaction was based upon a clear relationship between the research assignment and the course content.

Reflection: Student participants believed that being allowed to express personal opinion(s) in an assignment increased personal meaning but also necessitated adequate time for considering, pondering and assimilating new learning. “Inquiry takes time” (Stripling, 1995, p. 9). The student participants identified the importance of being given time to make sense of their issue and requested time for discussion with group members. These students knew, apparently intuitively, that having the time to reflect and discuss their issues would both illuminate and inform their personal thinking while contributing to the construction of personal meaning (Damasio, 2003). Reflection is one of the steps common to action research, the methodology used for this study. According to Kemmis and McTaggart (1988), “reflection seeks to make sense of processes, problems [and] issues; reflection is usually aided by discussion among participants” (p. 13).

Application: Application, as identified by the student participants, included not only making use of the knowledge learned in another situation, but also embodied analyzing, synthesizing and evaluating. Prior to discussing personal opinions, the relation between ideas needed to become clear and judgements needed to be made. Making a personal application encouraged students to construct or create ideas, not merely acquire facts for the purpose of reproduction (Wehlage & Smith, 1992). Discipline knowledge from English and from Library and Information Studies assisted with this process by expanding and offering new tools with which to interpret personal experience and apply what had been learned. For example,

What students learn as they read one text can be applied when they read the next. Moreover, when students have a stake in using texts to grapple with a question that matters, they'll be very motivated to learn the reading strategies, search techniques, or data collection tools they need. (Smith & Wilhelm, 2002, p. 191)

Feelings and Meaningful Assignments

As depicted in the findings, students demonstrated an emotional response, both positive and negative, to the research project and freely expressed how they were feeling. It became apparent that the way the students felt about the curriculum-based research assignment influenced their choice of topic as well as their successful completion. Kuhlthau (1993) and her Model of the Information Search Process was the first inquiry process model to recognize a primary role of feelings throughout the process and to identify that feelings were a part of each stage in the research process. Familiarizing the students with this model encouraged them. One student stated "It provided comfort, much comfort because then I understood it's all right to feel this way because other people feel it too and it's a normal process."

Throughout the research project, students consistently referred to the model and began to use the language associated with each stage and its corresponding feeling(s). Rather than suggesting that the project was 'stupid' and becoming disillusioned with research, the student participants were able to identify how they were feeling and to pinpoint why, based upon the model, they were feeling that way. Introducing Kuhlthau's Model of the Information Search Process prior to beginning the curriculum-based research project and reviewing it regularly with the students increased student understanding of the research process and prevented the misreading of feelings. "A misreading of feelings as a signal of failure is likely to occur when users do not have an understanding of the affective component of the constructive process of information seeking" (Kuhlthau, 1993, p. 118).

Feelings were also identified by student participants as being pivotal to the sustainability and completion of the research project; passion for the topic selected was a must. For example, one student expressed an interest in writing about infidelity, but decided that "I don't know that I feel passionately enough about infidelity ... I didn't really feel that I could argue it as well so I left that alone." This implies the necessity for an emotional commitment to the chosen research topic. The neurologist, Antonio Damasio (1994) states

I see feelings as having a truly privileged status. They are represented at many neural levels, including the neocortical, where they are the neuroanatomical and neurophysiological equals of whatever is appreciated by other sensory channels. But because of their inextricable ties to the body, they come first in development and retain a primacy that subtly pervades our mental life. Because the brain is the body's captive audience, feelings are winners among equals. And since what comes first constitutes a frame of reference for what comes after, feelings have a say on how the rest of the brain and cognition go about their business. Their influence is immense. (p. 159, 160)

During the initial interviews for this study, students fondly remembered elementary school as a time for doing research and projects that were interesting. Educators in elementary schools have always recognized the impact that feeling and emotion have on cognitive learning and, therefore, they often place precedence on teaching the individual over teaching content. However, educators in secondary schools have emphasized covering course content and have placed less priority on addressing the emotional needs of individual students. As a result, students' engagement with and commitment to, course content is often negligible.

Conclusion

Students often feel powerless within the school system. However, throughout this study, student participants began to understand that their ideas and thoughts about learning in general, and research in particular, were valued by teachers and other school personnel. They began to take ownership of their learning and expressed excitement about learning something new, about teaching themselves, about “discovering things in the library, discovering books and stuff that we never had a chance to discover before.” One student remarked that doing research “makes you feel smart and gives you confidence too.” It is imperative that feelings be acknowledged throughout a research project and that time is taken by the teacher and teacher-librarian to identify and discuss how students are feeling.

Through collaborative planning, the students and the teacher began to understand that the integration of relevant research into the core curriculum promotes meaningful involvement on the part of students. When skills and process were taught in a way that made sense to students, they became engaged learners and achieved at a higher level of performance. The teacher stated that the completion rate for this project was much higher than the usual 67% completion for research projects in English courses in the school.

Students believed that this experience had prepared them for post-secondary education. One student stated, “When the time comes in university when it needs to be a longer research paper, I’ll be more prepared.” Another student said, “It’s manageable now. Like I can do a research project when I get another one ... I know how to do this ... I know the steps.” In other words, the student participants felt that experiencing a research project provided them with a template for future research. Rather than feeling distressed whenever ‘research’ and/or a curriculum-based research project was mentioned, they understood that taking ownership of their topic, their time and their process, ensured successful completion and a positive feeling of accomplishment.

This study should encourage the educational community to hear the voices of young people, “and then to adjust our practice based on this learning” (McPhee, 1997, p. 243). The students identified choice, relevance, reflection and application as essential components of meaningful assignments. However, due to the unique composition of each class, the teacher and teacher-librarian need to remain open to differing definitions of ‘meaningful’ and adjust the curriculum-based research assignment appropriately, remembering that feelings (affect) significantly influence student learning.

Notes

This paper draws on my dissertation work and earlier work published in:

Scan. (November, 2001), (20)4.
School Libraries Worldwide. (January, 2001), 7(1).
Teacher-Librarian Today. (2001), 7(1).

References

- Baldwin, M. (2001). Working together, learning together: Co-operative inquiry in the development of complex practice by teams of social workers. In P. Reason & H. Bradbury (Eds.), *Handbook of action research* (pp. 287-293). London: Sage.
- Beaudoin, T. (1998). *Virtual faith*. San Francisco, CA: Jossey-Bass.
- Boostrom, R. T. (1994). Learning to pay attention. *Qualitative Studies in Education*, 7(1), 51-64.
- Bruner, J. (1973). *Beyond the information given: Studies in the psychology of knowing*. Edited by J. M. Arglin. New York: W.W. Norton & Co.
- Bruner, J. (1986). The inspiration of Vygotsky. In *Actual minds, possible worlds* (pp. 70–78). Cambridge, MA: Harvard University Press.

- Carson, T., Connors, B., Ripley, D., & Smits, H. (1989). *Creating possibilities: An action research handbook*. Edmonton, AB: Faculty of Education, University of Alberta.
- Damasio, A. (1994). *Descartes' error: Emotion, reason, and the human brain*. New York: HarperCollins.
- Damasio, A. (2003). *Looking for Spinoza: Joy, sorrow and the feeling brain*. Orlando, FL: Harcourt.
- Dervin, B. (1983). *An overview of sense-making research: Concepts, methods and results*. Paper presented at the annual meeting of the International Communication Association, Dallas, TX, May.
Retrieved from <http://communication.sbs.ohio-state.edu/sense-making/art/artdervin83.html>
- Dewey, J. (1933). *How we think*. Lexington, MA: Heath & Company.
- Dewey, J. (1938). *Experience and education*. London: Collier-Macmillan.
- Donham, J., Bishop, K., Kuhlthau, C. C., & Oberg, D. (2001). *Inquiry-based learning: Learning from Library Power*. Worthington, OH: Linworth Publishing.
- Eisenberg, M. B., & Berkowitz, R. E. (1990). *Information problem-solving: The Big Six Skills approach to library and information skills instruction*. Norwood, NJ: Ablex.
- Gadamer, H-G. (1975). *Truth and method*. New York: Crossroad Publishing.
- Gallagher, S. (1992). *Hermeneutics and education*. Albany, N.Y.: State University New York Press.
- Garland, K. (1995). The information search process: A study of elements associated with meaningful research tasks. *School Libraries Worldwide*, 1(1), 41-53.
- Gentry, M. and Springer, P. M. (2002). Secondary student perceptions of their class activities regarding meaningfulness, challenge, choice, and appeal: An initial validation study. *The Journal of Secondary Gifted Education*, 13(4), 192-204.
- Giroux, H. A. (1999). *Corporate culture and the attack on higher education and public schooling*. Bloomington, IN: Phi Delta Kappa.
- Hartzell, G. N. (2001). The implications of selected school reform approaches for school library media services *School Library Media Research*. Retrieved May 10, 2001 from http://www.ala.org/aasl/SLMR/vol4/reform/reform_main.html
- Irving, A. (1985). *Study and information skills across the curriculum*. London: Heineman.
- Joyce, M. Z., & Tallman, J. I. (1997). *Making the writing and research connection with the I-Search process*. New York: Neal-Schuman.
- Kelly, G. A. (1963). *A theory of personality: The psychology of personal constructs*. New York: W.W. Norton & Co.
- Kemmis, S., & McTaggart, R. (1988). *The action research planner* (3rd ed.). Victoria, Australia: Deakin University.
- Kuhlthau, C. C. (1993). *Seeking meaning: A process approach to library and information services*. Norwood, NJ: Ablex.
- Kuhlthau, C. C. (1998). Constructivist theory for school library media programs. In D. Callison et al (Eds.), *Instructional intervention for information use: Research papers of the sixth Treasure Mountain Research Retreat for school library media programs held in Oregon March 31- April 1, 1997* (pp. 14-22). CA: Hi Willow Research and Publishing.

- McGregor, J. H. (1995). Process or product: Constructing or reproducing knowledge. *School Libraries Worldwide* 1(1), 28-40.
- McKenzie, J. (1999, November). Questions and questioning: The most powerful technologies of all. *From Now On: The Educational Technology Journal*. Retrieved April 12, 2001 from <http://www.fno.org/nov99/techquest.html>
- McPhee, R. W. (1997). *The voices of young people: Being heard in our high schools*. Unpublished doctoral dissertation, University of Alberta, Edmonton.
- Miles, M. B. & Huberman, A. M. (1994). *Qualitative data analysis*. Thousand Oaks, CA: Sage.
- Small, R.V. (1999, January). An exploration of motivational strategies used by library media specialists during library and information skills instruction. *School Library Media Research*. Retrieved September 12, 2000 from <http://www.ala.org/aasl/SLMR/vol2/motive.html>
- Small, R.V., & Arnone, M. P. (2000). *Turning kids on to research: The power of motivation*. Englewood, CO: Libraries Unlimited.
- Smith, M. W. & Wilhelm, J. D. (2002). *"Reading don't fix no Chevys": Literacy in the lives of young men*. Portsmouth, NH: Heinemann.
- Stripling, B. K. (1995, Spring). Learning-centered libraries: Implications from research. *School Library Media Research*. Retrieved April 19, 2001 from http://www.ala.org/aasl/SLMR/slmr_resources/select_stripling1.html
- Stripling, B. K., & Pitts, J. M. (1988). *Brainstorms and blueprints: Library research as a thinking process*. Englewood, CO: Libraries Unlimited.
- Thomas, N. P. (1999). *Information literacy and information skills instruction: Applying research to practice in the school library media center*. Englewood, CO: Libraries Unlimited.
- Todd, R. J. (1995, Winter). Integrated information skills instruction: Does it make a difference? *School Library Media Research*. Retrieved April 19, 2001 from http://www.ala.org/aasl/SLMR/slmr_resources/select_todd.html
- Vygotsky, L. (1978). *Mind in society: The development of higher psychological processes*. Cambridge, MA: Harvard University Press.
- Wehlage, G. G. & Smith, G. A. (1992). Building new programs for students at risk. In F. M. Newmann (Ed.), *Student engagement and achievement in American secondary schools* (pp. 92-118). New York: Teachers College Press.

Biographical Note

Lois Barranoik is a doctoral candidate in the Department of Elementary Education at the University of Alberta, Edmonton, Alberta, Canada. She has a BA, a Professional Diploma (After Degree) in elementary education, and an MLS. Before returning to university, she was a classroom teacher and teacher-librarian in elementary and secondary schools, as well as a learning resources consultant for Edmonton Public Schools. Lois is president of the Alberta Teachers' Association Learning Resources Council. E-mail: lbarrano@telusplanet.net

Inquiry Takes Time: Breaking Down Barriers to an Understanding of the Inquiry Process of Grade 9 Students

Jennifer L. Branch

Assistant Professor, Faculty of Education
University of Alberta
Canada

This study examined the inquiry process of a group of Grade 9 students (ages 14-15) as they completed an inquiry project on a topic of their own choice and shared their project using a PowerPoint presentation. Data for the study was gathered using informal observations and two verbal protocol methods: Think Afters and Think Together. The study found that students needed a lot of time to explore information before they were able to web their ideas and develop an essential question to examine more fully. Choosing a topic focus and developing an inquiry question was a challenge for many students. Most required assistance from peers, teachers, and teacher-librarians as well as the time to explore background information.

Introduction

Understanding the information-seeking processes of adolescents involves looking at different kinds of situations in which there is an information need. Adolescents often need to find specific bits of information for school homework, reports, and personal interests. At other times, they are involved in more sustained inquiry where they use a variety of information sources to develop an understanding of a topic or issue in order to answer a question or propose a solution. The study followed a group of grade nine students in Beaumont, Alberta as they completed a large inquiry project using a variety of resources including online databases, online library catalogues, electronic encyclopedias, the Internet and the print collection of the school, public and university library. This study asked the following questions:

- What are the needs of grade nine inquirers?
- How does instruction influence the inquiry process?
- What affective behaviours need to be addressed during an inquiry project?
- How do grade nine students cope with too much information?
- How do we support small group and whole group discussions about the inquiry process?
- Do students seek help from other classmates who have special skills?
- How does the creation of a PowerPoint presentation shape the inquiry process?

A Research Process Model

For this study, Kuhlthau's work, a process approach to information seeking, was very important (Kuhlthau, 1983, 1988, 1991, 1993). Kuhlthau's Information Search Process (ISP) model includes affective, cognitive and physical aspects of the whole information-seeking process. It was the inclusion of all three aspects that, for Kuhlthau (1991), was "necessary for a model to address a wider, holistic view of information use" (p. 362). Her findings indicated that searchers experience six stages as they complete a search for information. These stages are called Initiation, Selection, Exploration, Formulation, Collection and Presentation. According to Kuhlthau, all information seekers pass through these same six stages when completing an inquiry project.

Information Technology, Information-Seeking and the Inquiry Process

Research on the information-seeking behaviour of children and adolescents is limited. According to Chelton and Thomas (1999),

One of the challenges of teaching graduate students to work with children and youth in school and public libraries is to inform their approaches to instructional design and their understandings of how people use information technology through an examination of current research. The problems in so doing have been exacerbated by the scarce, fragmented, and sometimes flawed nature of past research in information and library studies dealing with youth issues in information seeking. (p. 7)

Research using adolescent participants can help to inform not only those who work in school libraries and young adult departments of public libraries but also those who serve adults. For Chelton and Thomas, “considering the problems of youth in navigating increasingly sophisticated searching environments may be helpful to system designers, at the same time that they serve as cautionary guideposts to those who may have forgotten the problems that exist for novice users of all ages” (pp. 7-8). Of course, grade nine students are an interesting population all on their own. Their need for information for school projects and personal enjoyment becomes very important at this stage of their school life.

Researchers have tried to determine what it is that novice users do when accessing information in electronic environments. Oliver and Oliver (1996) have suggested that new skills are needed to find information in these new environments and that the skills necessary are quite different from the ones needed when using traditional sources. The researchers also reported that these specific skills did not develop from personal exploration of the system. They suggested the three main problem areas in the use of multimedia and hypermedia applications in schools and school libraries are disorientation, navigation inefficiency and cognitive overload. Without intervention by a teacher or teacher-librarian, Fidel (1991a, 1991b, 1991c) found that novice users lacked the ability to form effective search plans. Trumball, Gay and Mazur (1992) stated that novice users “have only impoverished strategies for synthesizing data into patterns” (p. 315). Pappas and Geitgey (1994) observed that novice user’s information-seeking strategies might be at any point on the simple to complex continuum. Most students left to their own devices failed to progress to a more analytical search strategy.

Marchionini (1989) contended that users of information technology are required to deal with finding too much information and so need different skills to deal with refining and selecting appropriate articles. Gross (1999), in her study of imposed queries in three school libraries, found that “in using resources, students had trouble finding answers when they had to search through a lot of text [and] when the resources did not use the same terminology they were given in class” (p. 513). Hirsh (1999) explored the relevance criteria and information seeking of ten Grade 5 children using the OPAC, the Internet, World Book Encyclopedia, and SIRS magazine index. Participants reported that they relied on teachers, librarians, and peers for help in finding information. Librarians were asked for help with search terms, search strategies and locating materials. Fidel et al. (1999) studied searching behaviour of eleventh- and twelfth-grade high school students on the Internet. The first finding was that “searching was both a social and academic event” for the students (p. 28). Fidel et al. stated that the “interchanges covered many aspects relating to searching, ranging from technical pointers to tips about searching to interpretations of the questions in the assignment, and all intertwined with social intercommunications, mostly verbal, typical of students their age” (p. 28).

Fidel et al. also reported the students’ opinions about the web. For students, the Internet was appealing because of the speed of locating information. Therefore, when the Internet failed to produce results quickly, students became frustrated. They were also frustrated when they felt like they had spent a reasonable time and could not locate information.

Bilal (2000, 2001, 2002) reported the results of a research project that looked at 22 grade-seven students’ use of the Yahooligans! Web Search for fact-based and self-generated search tasks. Bilal (2000) found that those children who used only single or multiple concepts alone were more successful than those who used single or multiple concepts as well as natural language phrases. Scrolling, use of the back button, and navigating links were three important physical behaviours that all students used. Students browsed more on the self-generated tasks and were much more satisfied with results than when the topics were assigned (Bilal, 2002).

Bilal (2002) also found that the students' self-generated topics were "research-oriented and broad in nature" (p. 1181). A full one third of the students were unable to formulate a focus for their search and those who "searched under their initial broad topics remained undecided about the information to select from the results they retrieved" (Bilal, 2002, p. 1181). In fact, Bilal found that most students needed mediation to find their true information need. Students continue to need instruction and practice to be able select an inquiry topic and to find a focus for their inquiry.

There is a body of literature that can provide support for the use of children and adolescents as participants in the study of information seeking. Children and adolescents are an interesting population to study and the research described has contributed greatly to our overall understanding of how children engage in information seeking and learning.

Research Method

This study followed four participants in a Grade 9 (ages 14-15) Language Arts class. The students went to a suburban/rural high school in a small town about 30 minutes drive from Edmonton, Alberta, Canada. The French/English bilingual school served students from Grades 9-12 (ages 14-18). The students were followed for two months (a total of about 30 instructional hours) as they completed an inquiry project on a topic of their own choice. During the two months, participants shared their information-seeking strategies and their reflections on the inquiry process as a small group as well as individually. The researcher was involved in assisting with all students in the class so informal observation of other students also occurred.

Different types of verbal protocols were used to collect data from the participants. In a previous study, Think Alouds and Think Afters were used to collect data from participants (see Branch, 2001, 2000). Think Alouds are verbal reports that are gathered while a participant is completing a task, e.g., searching for information on the Internet. Think Afters are verbal reports gathered after a participant has completed a task, e.g., talking about the inquiry process after completing the inquiry project for this study. In this study another method, Think Together, was used to describe a group of participants doing Think Alouds together, i.e., discussing their information-seeking processes as they complete a group or individual inquiry project.

The four participants, two boys and two girls, were selected by the teacher-librarian to be a part of the study. The researcher did not know the participants prior to the study. The participants and the rest of the class received instruction from the teacher-librarian during the first nine classes. This instruction included strategies to help students with inquiry process, critical thinking, searching different databases, the Internet, and the online catalogue, planning, and webbing topic ideas. Informal observation of the participants took place during every class and instruction was video-taped. On four occasions during the inquiry project, the participants were asked to do Think Together by sharing their ideas, processes, resources, and plans. Participants also completed Think Afters throughout the inquiry project and their feelings about the inquiry project. These responses were given using a personal tape recorder.

Summary of Findings

What are the needs of grade nine inquirers?

In order to formulate a focus for their inquiry project, the four Grade 9 inquirers in this study needed time and the mediation of both the teacher-librarian and the researcher. This time included instruction in how to plan for an inquiry and how to retrieve a variety of print, non-print and electronic resources to support their inquiry. The instruction focused on strategies to develop an essential question, to map ideas and questions that arise from the essential question, to create an outline, to develop a rubric for evaluation, to think about higher level questions and critical thinking techniques, to search online databases, library catalogues, and the Internet, and to evaluate Internet sites. In other words, students needed time, instruction, and mediation to get to the essential question and develop a plan for their inquiry. One student noted, "Once I had the topic and knew what information I needed, it wasn't hard to find information."

Finding an essential question is the hardest part of any inquiry and one that requires students to commit to a topic, find a focus, and then be engaged enough to sustain a long inquiry. One student in his Think Afters stated,

Next time I would just pick a topic right away, even if I didn't think it would be good. The first topic I thought of was mountain biking, but I didn't like it at first so I wasted a bunch of time trying to find something better, just to come back to the same thing.

Once they determined their focus, students needed very little assistance with note-making, creating the PowerPoint and sharing aspects of the project. It seemed that once the essential question was determined, the inquiry moved forward quite well. In the Think Afters, one student stated,

Well, my subjects weren't all over the place. They were all basic information on how golf works and so I think that was nice that I didn't have topics that didn't have any relation towards each other. They all fit together nicely."

How does instruction influence the inquiry process?

In this study, instruction in the early weeks of the inquiry allowed students to gain skills and strategies that would help them better be able to plan for inquiry and retrieve a variety of materials to support their needs and interests. The instruction was designed to support students as they planned for their inquiry and allowed them time to explore questions and issues. In the final Think After one participant stated, "While doing this research project I learned that I should plan my time a little bit more. If I am not finding information in one source, not to look at all the websites, just try to find a book or something like that that may help me on my research. Then I won't be so pressed for time towards the end..."

The retrieval strategies that were taught also gave students time to explore their topic focus in the databases, catalogues, and on the Internet. This allowed students time to develop the background knowledge necessary to develop an essential question. One participant commented, "Next time I would start out with a book instead or would just do a few websites and stuff like that because for the topic I chose the Internet wasn't really the best tool to use." Another participant felt that next time he would "probably find more sources of information. I had one good book but I probably should have found more."

What affective behaviours need to be addressed during an inquiry project?

Students were excited to begin an inquiry project of their own choice. However, this meant that some topics needed refining. An interest in World War II, for example, developed into an essential question of the conditions that must exist for World War III to happen. An interest in the television show, *Friends*, developed over time into a question of whether the actors and actresses that play the characters on *Friends* are worth one million dollars an episode. An interest in witches developed into a question of the role that recent pop culture has played in changing our perceptions of a witch. One student noted, "My least favorite part was just trying to find a good topic."

Once committed to a topic focus, students were able to sustain their inquiry over the next 5-6 weeks. Even in the final Think After (completed a week after the inquiry was complete), students still felt committed to their topic focus. All participants felt very positive about their inquiry topic. One student remarked,

If I started this project all over again I would not choose a different topic because this topic I find now is very, very interesting. At first I had doubts because I wasn't really finding anything [on the Internet] but then I found the books and now I am really happy with it.

Another stated, "If I were starting the project all over again I'd go with the same topic right from the beginning." A third commented, "If I were to do this project over again, I don't know. It was a pretty good topic to use I guess. I don't know what other kind of topic I would use."

There was some frustration and confusion as students tried to move from an interest to an essential question. There was also some frustration when trying to find information on the Internet to answer their question. Two of the students preferred to use books to complete the assignment as a result of finding inappropriate information on the Internet. One student commented in the Think Afters that, "What worked really, really well for me on this project though was the two books because they had a lot of good information."

There was some anxiety with creating bibliographic entries from information gathered on the Internet. A few students failed to copy down all the information they needed from Internet sites. This was a teachable moment and the teacher-librarian was able to show students how to use NoodleTools (www.noodletools.com) to record their bibliographic information. Even though students knew that bibliographies were part of the evaluation of the inquiry, this was a very unpleasant part of the inquiry for them.

During the processing and creating phase (Kuhlthau's presentation phase), students were, for the most part, excited and busy. One student commented that this was his favorite part of the assignment was "actually designing the slides and putting the info on the slides." This was a time when the teacher-librarian and teacher could move about the room answering small questions and monitoring progress. Students enjoyed using PowerPoint to present their new knowledge. The software package allows for a lot of creativity and students were keen to add music and images to their presentations. For many students this was the best part of the inquiry. One student stated, "My favorite part of the project was probably working with the animations. I don't mind working with the software. I think it is kind of fun sometimes." However another student (who worked with a partner) stated that the hardest part of the inquiry was "deciding what information we would use and not use because it was all good."

There was some anxiety when it came time to present their inquiry projects to others in the class. This is not surprising given the fact that the presenters are teenage boys and girls. However, most students were very excited to share their inquiries.

How do grade nine students cope with too much information?

Many students found the amount of information on the Internet to be very challenging. As a result, the teacher-librarian and I guided them to online databases including SIRS Researcher and Electric Library/Big Chalk. Many students found information that was useful for their inquiry here. However, other students with essential questions such as influence of the characters on Friends, gender issues in professional snowboarding, and strength training for golfing, found many useful Internet sites. Instruction on how to narrow and broaden searches and how to find the best resources on the Internet helped to alleviate some of the students' confusion and anxiety. One participant shared the following comment:

My favorite part of this assignment I would have to say was getting the information because I found out a lot of interesting things. I couldn't put everything on my slide show that I wanted to, because there was way too much information, but I found out a lot of stuff.

Some students chose to find information in other ways. Several students selected print resources from the University of Alberta library or the public library to support the materials in their school library. Students also acknowledged when they felt more comfortable using print materials and found a quiet corner in the library and did their work away from the computer lab. The teacher-librarian and the researcher encouraged students to choose the best possible resources to answer their inquiry questions.

How do we support small group and whole group discussions about the inquiry process?

Using the Think Together Method allowed the four participants to spend time talking about the inquiry process during different stages of the inquiry. Most of the discussion focused on feelings that were being experienced during the current stage of inquiry, i.e., excitement, frustration, relief, anxiety, information overload, and so on. During each Think Together the researcher encouraged students to look at Kuhlthau's Information Search Process model to locate their current feelings, as well as progress on their inquiry in relation to the six stages. This was a very useful activity as students could discuss being "through" one stage and onto the next.

Doing a large inquiry project such as this can be intimidating and frustrating. One student stated,

My least favorite part of the assignment is having to do these because I'm not really that good at handing things in on time sometimes. Especially when it is a project like this because I get too interested in the information and I research too much for my project and then I just don't have it done on time. I am a very slow worker when it comes to doing PowerPoint because I want everything to work just the way I want.

Allowing participants to have the time to talk about the process and to relate their feelings to a model was a very effective way of encouraging an open and safe dialogue. Large group discussion was also encouraged during the instructional times. The teacher-librarian had a strong sense of the need to reflect on the process throughout an inquiry and created a safe atmosphere in which to question and wonder.

Do students seek help from other classmates who have special skills?

Students sought help from classmates who had special skills in creating “flashy” PowerPoint presentation. Many students had experience with using PowerPoint to create basic presentations but wanted to be able to incorporate sound and images into the presentation. Those students with expertise in locating copyright free images and sounds were highly sought after during the creating stage of the inquiry. There was also a lot of discussion on design of the PowerPoint presentation and how to “capture the interest of the audience.”

How does the creation of a PowerPoint presentation shape the inquiry process?

Using PowerPoint necessitated that students deliver succinct, organized information in a creative way. This meant that students could make point-form notes from print and electronic sources and use them as the basis for their presentation. Because PowerPoint presentations eliminate the need for lengthy written ideas and focus on “hitting the highlights” students spent more time organizing information into coherent chunks and adding visuals to engage their audience of 14-15 year old students. In other words, “flashy” presentations were important and so locating appropriate visuals and sounds became another part of the inquiry process.

Summary of Findings

Participants were open to sharing information and ideas in the Think Together situations and found the discussions helpful to their planning and organization of their inquiry. Students felt comfortable with their fellow participants and used ideas and conversations as a springboard for their own ideas and concerns. Students were at different stages of the Kuhlthau model every time we met for Think Togethers. Focus Formulation happened during 8th class of 22 classes and this was a very exciting time to be working with the students. While working towards an inquiry question students needed emotional support as well as instruction/mediation. Two of the students found that books proved to be the best information source. There was some frustration when the Internet didn’t provide the best possible information or when there was too much information.

Implications and Conclusions

This study found that developing an essential inquiry question takes time, instruction, mediation and support. Choosing a personal choice inquiry topic requires assistance from peers and teacher-librarians and the time to explore background information. For many of the students this was the first time they had been allowed to choose their own topic focus, and this was a challenging learning experience for many of them.

Teachers and teacher-librarians need to recognize that students need more opportunities to choose their own essential questions. The long time that this group of students needed to find a topic and choose an essential question is indicative of the lack of skills and strategies necessary to choose good topics. By providing students with opportunities to choose their own inquiry topics for both large and small inquiry projects, students will be better able to move more quickly into inquiries.

Teachers can also make the task less daunting if students can choose a topic from within a curriculum topic for which they have already developed considerable background. This can be especially useful if students are told at the beginning of the unit that they will be able to do an inquiry at the end. Students can then begin to generate ideas and talk to others about possible inquiry topics. This also allows students to begin to look for other information outside of school and to develop an essential question.

There were still students who liked to use books and who gravitated to books as their first information source. However, most students started with the Internet. Some of these students were discouraged when their topic wasn’t covered well on the Internet or if their search terms did not help them locate the appropriate information. Helping students to manage their time was an important part of helping students to do an inquiry project. Given time, students

could create thoughtful, critical, and important inquiry projects. Allowing students to create PowerPoint presentations created more interest in the inquiry project.

Using Think Together as a way of talking about both the affective and cognitive experiences of completing an inquiry project was very useful. Open dialogue using Kuhlthau's stages allowed students to recognize their feelings and cognitive struggles and successes were a natural part of completing an inquiry process. Using the model consistently to guide discussion allowed students to chart their own progress and to realize when they have moved on to a new stage.

Large inquiry projects such as this require both emotional and cognitive support from peers and teachers/teacher-librarians. Instruction in the planning and retrieving stages of the inquiry supported students in the most challenging and most important part of the inquiry. A testament to the time and effort spent in the early stages of the inquiry was the level of commitment students displayed throughout the inquiry and their overwhelming agreement that they would not choose another topic focus if doing the inquiry again.

References

Bilal, D. (2002). Children's use of Yahoo!igans! web search engine: III. Cognitive and physical behaviors on fully self-generated search tasks. *Journal of the American Society for Information Science and Technology*, 53(13), 1170-1183.

Bilal, D. (2001). Children's use of Yahoo!igans! web search engine: II. Cognitive and physical behaviors on research tasks. *Journal of the American Society for Information Science and Technology*, 52(2), 118-136.

Bilal, D. (2000). Children's use of the Yahoo!igans! web search engine: I. Cognitive, physical, and affective behaviours on fact-based search tasks. *Journal of the American Society for Information Science*, 51(7), 646-665.

Branch, J. L. (2001). Junior high students and think alouds: Generating information-seeking process data using concurrent verbal protocols. *Library and Information Science Research*, 23, 107-122.

Branch, J. L. (2000). Investigating the information-seeking processes of adolescents: The value of using think alouds and think afters. *Library and Information Science Research*, 22(4), 371-392.

Chelton, M. K., & Thomas, N. P. (1999). Introduction: Why a special topic issue on youth issues? *Journal of the American Society for Information Science*, 50(1), 7-9.

Fidel, R., Davies, R. K., Douglass, M. H., Holder, J. K., Hopkins, C. J., Kushner, E. J., Miyagishima, B. K., & Toney, C. D. (1999). A visit to the information mall: Web searching behavior of high school students. *Journal of the American Society for Information Science*, 50(1), 24-37.

Fidel, R. (1991a). Searchers' selection of search keys: I. The selection routine. *Journal of the American Society for Information Science*, 42(7), 490-500.

Fidel, R. (1991b). Searchers' selection of search keys: II. Controlled vocabulary of free-text searching. *Journal of the American Society for Information Science*, 42(7), 501-514.

Fidel, R. (1991c). Searchers' selection of search keys: III. Searching styles. *Journal of the American Society for Information Science*, 42(7), 515-527.

Gross, M. (1999). Imposed queries in the school library media center: A descriptive study. *Library and Information Science Research*, 21(4), 501-521.

Hirsh, S. (1999). Children's relevance criteria and information seeking on electronic resources. *Journal of the American Society for Information Science*, 50(14), 1265-1283.

Kuhlthau, C. C. (1993). *Seeking meaning: A process approach to library and information services*. Norwood, NJ: Ablex.

Kuhlthau, C. C. (1991). Inside the search process: Information-seeking from the user's perspective. *Journal of the American Society for Information Science*, 42(5), 361-371.

Kuhlthau, C. C. (1988). Developing a model of the library search process: Cognitive and affective aspects. *Reference Quarterly*, 27, Winter, 232-242.

Kuhlthau, C. C. (1983) *The research process: Case studies and interventions with high school seniors in advanced placement English classes using Kelly's theory of constructs*. Unpublished doctoral dissertation, Rutgers University.

Marchionini, G. (1989). Information-seeking strategies of novices using a full-text electronic encyclopaedia. *Journal of the American Society for Information Science*, 40(1), 54-66.

Oliver, R., & Oliver, H. (1997). Using context to promote learning from information-seeking tasks. *Journal of the American Society for Information Science*, 48(6), 519-526.

Pappas, M., & Geitgey, G. (1994). Observing student searches in an electronic encyclopedia. *The Book Report*, 12(5), 13-14.

Trumball, D., Gay, G., & Mazur, J. (1992). Students actual and perceived use of navigational and guidance tool in a hypermedia program. *Journal of Research on Computing in Education*, 24(3), 315-328.

Biographical Note

Dr. Jennifer Branch is the Coordinator of the Teacher-Librarianship by Distance Learning program. She took up the position in July of 2001 after a year in the School of Information Science and Policy at SUNY Albany and after completing her PhD at the University of Alberta in the School of Library and Information Studies. She has Bachelor of Arts, Bachelor of Education, and Master of Library and Information Science degrees. She worked as a junior high teacher and teacher-librarian in Inuvik, Northwest Territories for 6 years, as a teacher in Northern Ontario and did research in Aberdeen, Scotland. Jennifer is a newlywed and loves golf, gardening, and home renovations. Email: jbranch@ualberta.ca

Laurel A. Clyde

Professor and Chair of the
Library and Information Science Department
The University of Iceland

This paper for the Seventh International Forum on Research in School Librarianship describes a small-scale pilot study that is part of a much larger longitudinal study of "Research and Researchers in School Librarianship". The pilot study is a preliminary attempt to address issues associated with determining the quality of the published research in the field of school librarianship. The main aims are first, to test the extent to which experienced evaluators agreed in their rankings of research articles on the basis of quality; and secondly, to investigate the ways in which experienced evaluators evaluate research articles. A qualitative, naturalistic research design is used. The data collection was still proceeding at the time the paper was being written; the conference presentation will therefore provide further information about the results of the data analysis and draw some conclusions from the analysis. However, it is already clear from the literature review that the relationship between research quality and the adoption of the results of that research in decision making is more complex than we have supposed.

Background

Good he pronounces to be that in which the beast delights and evil to be that which he dislikes; and he can give no other account of them except that the just and noble are the necessary, having never himself seen, and having no power of explaining to others the nature of either, or the difference between them, which is immense.
(Plato, *The Republic*, Book VI)

The small-scale pilot study that is described in this paper forms just one part of a larger longitudinal research study that is investigating "Research and Researchers in School Librarianship" over more than a decade from 1991 onwards. The research is supported by a growing bibliographic database of research articles and papers in the field of school librarianship, published in English. A preliminary report, provided at the 2001 IASL conference in Auckland, New Zealand, discussed the research methods being used in the long-term project as a whole. This report also discussed the strategies used to define "research publication" and the boundaries of the field of "school librarianship" (Clyde, 2001), and the strategies used to identify the research articles and papers.

A presentation of mine at the 2002 IASL conference in Petaling Jaya, Malaysia, concentrated on the characteristics of the research in the field of school librarianship that was reported in English, from 1991 to 2000 inclusive, the methodologies used by researchers, and the topics that were investigated (Clyde, 2002). It showed that through the decade the amount of published research (in the form of research articles and conference papers) increased, that researchers were using a greater variety of methodologies to address research problems in the field of school librarianship by the end of the decade, and that important questions related to library and information services in schools (such as the role of the school librarian in information literacy work in schools) were being studied. Other work currently being undertaken by the author for the "Research and Researchers in School Librarianship" project is looking at the characteristics of the researchers in the field of school librarianship and their perceptions of the current state of research in our field.

Despite the signs of progress mentioned above, problems remain. The "Discussion and Conclusions" section of the paper presented at the 2002 conference in Petaling Jaya drew attention to some of the problems and highlighted one in

particular: “the quality of the research that is being published in the field of school librarianship [is] an issue that has to be faced if we expect that the profession’s research will influence decision-makers” (Clyde, 2002, p.68) or the people who are responsible for library and information services in schools. Further,

Between 1991 and the end of 2000, only a relatively small proportion (58 articles of 389, or 14.9%...) of the research articles in school librarianship were published in journals that are on the ISI (Institute of Scientific Information) “Master Journal List” (an indicator of quality that is accepted by many universities for purposes of faculty evaluation). However, this “Master Journal List” omits the two major research journals in the field of school librarianship, *School Libraries Worldwide* and *School Library Media Research*, both peer-refereed journals of obvious quality, that attract articles from the best-known researchers in the profession. (Clyde, 2002, p.68)

Evaluation of Published Research

While many commentators have discussed research quality in library and information science as a whole (for example, Katzer, 1989; McClure & Bishop, 1989; Hernon, 1999) and school librarianship in particular (for example, Henri & Freeman, 1998; Haycock, 1994), there is little agreement about what represents “quality” in a research publication in this field or how quality can be recognized or measured. The criteria that exist (including the criteria established for the “Research and Researchers in School Librarianship” project) are generally descriptive rather than evaluative; that is, they describe features that an evaluator would expect to see in a research report, rather than indicators of quality. Thus, for example, according to Gu-rún Pálsdóttir et al. (1997, p.88) a research report should include a statement of aims, research questions or hypotheses, a description of the methodology, information about data collection and analysis, discussion of the results, and a bibliography, among other things.

Sometimes research evaluation is “externalised”, that is, it is based on factors external to the content of the research article or paper itself, such as the quality of the journal in which the article was published. The assumption behind these approaches is that “high-quality journals ... are likely to publish high-quality research” (Lee, *et al.*, 2002, p.2805). Evaluation of research articles then becomes a matter of identifying the quality journals. Examples of strategies that use this approach include citation analysis (see, for example, Garfield, 1979; Harter, 1996; Nicolaisen, 2002), journal impact factor analysis (see, for example, Opthof, 1997), approaches based on the reputation of journals (see, for example, Giles *et al.*, 1989; Blake, 1996; Kohl & Davis, 1985), peer-review status (Lee, *et al.*, 2002), manuscript acceptance rate (Lee, *et al.*, 2002), indexing of the journal in established indexing or abstracting services (Gehanno & Thirion, 2000), and number of subscribers to the journal (Lee, *et al.*, 2002). All approaches have their strengths and limitations. However, there are some who believe that while they have their uses, these strategies should not be used for research evaluation. MacRoberts and MacRoberts (1989), for example, have studied “problems of citation analysis” in a critical review, while Seglen (1997) has written an article titled “Why the impact factor of journals should not be used for evaluating research”. Lowi (1992) has criticised the “reputational” approach to journal evaluation on the grounds that the studies are based on the subjective evaluations and perceptions of the participants; Nkereuwem (1997, p.75) noted that the “ranking of a journal will depend to a large extent on the values which one brings to the evaluation process”.

Alternatively, a research article or paper will be assumed to be of good quality if it appears in a publication that is on the “ISI Master Journal List” or the “Guide to the Core Journals of China” (Calvert & Zengzhi, 2001) or other recognised list — despite the fact that it is the journals that are evaluated for inclusion in these lists (see, for example, Testa, 2002) rather than individual articles, and despite the fact that the criteria used for evaluating the journals tend to reflect the characteristics of the journals rather than of the articles they contain. An example of this is the ISI journal selection criteria:

The evaluation process consists of evaluation of many criteria such as, Basic Journal Publishing Standards (including Timeliness of publication, adherence to International Editorial Conventions, English Language Bibliographic Information (including English article titles, keywords, author abstracts, and cited references.) ISI also examines the journal's Editorial Content, the International Diversity of its authors and editors. Citation Analysis using ISI data is applied to determine the journal's citation history and/or the citation history of its authors and editors. (Institute of Scientific Information, 2002b)

Katzer, Cook and Crouch caution that consumers of research cannot “assume that an editor will successfully weed out all major errors and poorly constructed studies. The explosion of information, the reward structure in higher education, the increasing number of new journals being published, the evaluation procedures used by editors, and a variety of other factors” (Katzer, Cook & Crouch, 1998, p.6) all mean that it is necessary that each published research report be evaluated on its own merits if the results of the research are to be used to improve practice. “When, if ever”, they say, “can you rely on the reputation of a journal or author instead of evaluating the research itself? What is the trade-off in terms of your time and effort versus the danger of acting on the basis of erroneous information?” (Katzer, Cook & Crouch, 1998, p.11) It is this aspect of research evaluation - the evaluation of individual research publications in the field of school librarianship — that is the basis of this pilot study.

Aims

This paper will discuss work that begins the process of addressing questions associated with the quality of published research articles and papers in the field of school librarianship. How do we understand quality? Is there any agreement about the nature of research quality? Is there any agreement about what constitutes a quality research report in our field? Do experienced research evaluators have explicit or implicit criteria that they use when evaluating research reports? Or is it rather a case of “I can’t explain what quality is but I know it when I see it”? What are the strategies employed by experienced research evaluators who are evaluating published research reports in the field of school librarianship?

The small-scale pilot study had two main aims: first, to test the extent to which experienced evaluators agreed in their rankings of research articles on the basis of quality; and secondly, to investigate the ways in which experienced evaluators evaluate research articles. The pilot study was also designed to test the efficacy of the methodology as a means for studying issues associated with research quality.

The Literature

The protagonist (a university teacher in one manifestation) in Robert Pirsig’s book *Zen and the art of motorcycle maintenance*, confronts the idea of quality in academic writing:

Quality ... you know what it is, yet you don’t know what it is. But that’s self-contradictory. But some things are better than others, that is, they have more quality. But when you try to say what the quality is, apart from the things that have it, it all goes *poof!* There’s nothing to talk about. But if you can’t say what Quality is, how do you know what it is, or how do you know that it even exists? If no one knows what it is, then for all practical purposes it doesn’t exist at all. But for all practical purposes it really does exist. What else are the [students’] grades based on? Why else would people pay fortunes for some things and throw others in the trash pile? Obviously some things are better than others ... but what’s the ‘betterness’? ... So round and round you go, spinning mental wheels and nowhere finding any place to get traction. What the hell *is* Quality? What *is* it? (Pirsig, 1975, p.178)

An extensive literature search was undertaken to provide an overview of the literature related to quality and particularly research quality. Among other things, it sheds some light on ideas about quality and the ways in which quality has been perceived and measured, across a number of fields and within a number of different theoretical frameworks. It provides some insights into the problems associated with making judgments about quality and the attempts that have been made to address these problems. It was also expected that the literature review would provide a theoretical framework for data analysis.

The literature suggests that there are at least four distinct approaches to the assessment of quality in research reporting. The first is based on the Platonic idea of quality as ultimate truth or ultimate good. While in the world everything may fall short of true quality, it is nevertheless something at which we might aim. The second notion of quality is as relative value - research reports are assessed in relation to each other, and found to be relatively superior, average, or inferior in relation to the collection of reports as a whole. The third notion of quality is of something that varies according to the social and cultural context. What represents quality in one setting might not be appropriate in another. And finally, a fourth approach to quality is based on criterion-referenced evaluation — an assessment of the

extent to which a research report meets certain pre-established criteria, those criteria often being related to the purpose of the evaluation. These four approaches will be discussed briefly in order.

1. *Quality as ultimate good.* In Plato's Republic, Socrates says to Adeimantus, "Then let me ask you to consider further whether the world will ever be induced to believe in the existence of absolute beauty rather than of the many beautiful, or of the absolute in each kind rather than of the many in each kind?" Later, in a dialogue between Glaucon and Socrates, there is a discussion of "an absolute beauty and an absolute good... the very essence of each". In our postmodern world, absolutes are greeted with suspicion, and while philosophers still discuss quality in relation to aesthetics, there has been little work in library and information science or education in recent decades that assumes a reference point of absolute quality or "perfection".
2. *Quality as a relative value.* When this approach is taken, research reports are assessed in relation to each other, with the aim of identifying the best of the group, and those that are acceptable, while eliminating the weakest. This type of evaluation may be carried out for a particular purpose - for example, for selecting articles for a research journal, or for a research conference, or for inclusion in a book. Except that its aim is not so much to evaluate the articles as to investigate the process of evaluation, this present pilot study in one sense fits into this approach; certainly an earlier project within the context of the longitudinal study of "Research and Researchers in School Librarianship" (Clyde, 1996) fitted into this approach.
3. *Quality as a social or cultural construct.* In discussions at the IFLA (International Federation of Library Associations and Institutions) Continuing Professional Education Round Table pre-conference in Aberdeen, Scotland, in August 2002, it was noted that "quality" has different meanings in different contexts, different cultures, different countries, and for different groups of people (Clyde, 2003). A Danish study of research evaluation (Hansen, 1996) stressed the different aims of evaluation in different countries (for example, whether research evaluation was aimed at controlling research output or supporting the development of research productivity and quality) and the different processes used for evaluation in different places as a result. This is supported by the work of Murphy (1994) who studied the different approaches to research assessment in the United States, the United Kingdom, Australia and northern Europe.
4. *Quality based on criterion-referenced evaluation.* Criteria for assessing the quality of research are outlined in a number of studies. Andy Smith (2001) suggests that "relevance, timeliness, objectivity, and methodological integrity are the hallmarks of high quality research in applied fields" such as our own. Calvert and Zengzhi (2001) used six criteria (with articles rated on a ten-point scale for each) for evaluating research articles. The criteria were the presentation of new information or data, an acceptable research design, an acceptable level of scholarship, work that furthers the advancement of knowledge, "theoretical soundness", and the use of "appropriate methodology and analysis". In the field of clinical medicine, scoring criteria have been developed to enable general practitioners to assess the quality of research articles on the basis of the quality of the research methodology; one such set of criteria is known by the acronym READER (MacAuley, 1994).

One well-known variation of the fourth approach is quality as "freedom from error". In their textbook, *Evaluating information: A guide for users of social science research*, Katzer, Cook and Crouch (1998, p.7) advocate an "error model" of research evaluation. They believe that "the researcher's job is first to identify, and then to remove or reduce, sources of potential error so that findings can be trusted. Consequently, it is the job of an evaluator to challenge a research report by searching for possible errors missed by the author." Thus their strategies for evaluation focus on "how well the researchers have identified, removed, and controlled the potential errors in their study. To evaluate information means to weigh those factors in a study that have the potential to add error with those factors a researcher uses to decrease error." (Katzer, Cook & Crouch, 1998, p.8) Their strategies include criteria and points to consider when evaluating research.

Within these four contexts, for some people quality might reflect something that is quantitative and easily measurable; for others, the measurement of quality may require a more qualitative approach (Clyde, 2003).

There is little research in the field of library and information science that deals with the evaluation of individual research articles or papers, though the education literature provides some examples. The work of Asher and Vockell (1973) will be referred to later; they carried out an experiment in which both researchers and administrators evaluated a collection of documents and the evaluations by the two groups were compared. A 1963 study discussed briefly by Wandt (1965) also compared evaluations of research reports in the field of education, though too little information is provided to assess the conclusions drawn from this work.

However, the medical literature provided a number of examples of this type of study. For instance, Lee *et al.* (2002) had reviewers assess the quality of 243 research articles chosen from medical journals, using the READER research evaluation instrument (an instrument previously tested for validity and reliability). The reviewers received training in using the instrument and had access to detailed printed instructions as well. Two reviewers looked at each article independently, and where the two scores for an article were significantly different, the reviewers were required to reach a score by consensus. The inter-rater reliability was only fair, and in ten per cent of cases, the scoring required adjudication. The results supported the observation that “articles of higher methodological quality are published in journals whose articles are cited more frequently (higher citation rates and impact factors), read more widely (higher circulation, indexed ...), and scrutinized more carefully by editors and outside peer-reviewers (lower manuscript acceptance rates)” (Lee, et al., 2002). However, this is not altogether surprising, given that the articles were selected from journals on the ISI lists, and identified through searches of the MEDLINE indexes. Further, articles that did not meet basic clinical research methodology requirements were excluded on the grounds that the READER instrument was not designed to deal with them. The field of library and information science has no generally accepted research evaluation instrument (that is, an instrument designed for the evaluation of individual articles), nor one that has been tested through research. An instrument such as READER, from another field, could not be used in library and information science because it relates specifically to the methodological concerns of research in medicine (for example, the use of randomized control trials, case-control, and cohort studies). In addition, use of such an instrument requires that the research articles for the study be pre-evaluated to ensure that they meet certain research requirements.

Methodology

The pilot study was based on a qualitative, naturalistic research design, with subjects being asked to perform a task associated with the evaluation of published research reports and then to comment on the task. A number of people who are experienced in evaluating research were asked to evaluate a set of five research articles by ranking them in terms of their quality as research reports, and then commenting on their reasons for choosing the article they ranked first. The data collection instrument forms Appendix I.

The articles were randomly selected from among the articles and published conference papers in the database that supports the “Research and Researchers in School Librarianship” project as a whole. At the time of selection (November 2002), the database contained records for more than 500 articles and papers. Each article or paper represented in the database was given a number, and then numbers were drawn from a barrel; after being recorded, each number was returned to the barrel so that all articles and papers stood an equal chance of being selected. More numbers were drawn than needed, in case any of the selected articles or papers were written by the people who were chosen to be the evaluators. The five articles came from *International Information and Library Review*, *School Library Media Research (online)*, *Journal of Librarianship and Information Science*, *Journal of Education for Library and Information Science*, and *African Journal of Library, Archives and Information Science*. For purposes of the research, each of the five articles was allocated a letter from A to E (again, by a process of drawing letters from a barrel), and the articles were listed by this letter on the data collection instrument. Because the purpose of the research was not to evaluate these five articles as such, but rather to gain an understanding of how evaluators determined research quality, the relationship between the identifying letters and the articles will not be revealed in this report. In discussion during the conference presentation, only the identifying letters will be used to refer to articles.

The evaluators fell into two distinct groups: people with experience in evaluating research in the specific field of school librarianship (and with knowledge of school librarianship as a topic); and people with experience in evaluating research *per se* (and who had no specialist knowledge of school librarianship as a topic). The invited evaluators included editors of research journals, referees for research conferences, professors whose teaching field is research methodology, experienced examiners of research theses, and assessors for research databases.

Table 1: Experienced Research Evaluators Who Took Part in the Pilot Study

	Editor of research / journal/sect	Referee for research conference	Teacher of research methodology	Examiner of research thesis	Assessor for research database	Other
Specialist knowledge of school librarianship	2	3			1	1
No specialist knowledge of school librarianship	3	1	1			1

Note that the categories used in this Table indicate the primary reason for selection of each evaluator.

Each evaluator was first contacted in person or by email to seek his or her cooperation in the pilot study. The purpose of the study was explained and the potential participants were given an indication of the nature of the work involved and the likely time commitment needed. Those who agreed, received by mail a package with a copy of the data collection instrument, a covering letter with instructions, the five articles, a return envelope for the data collection instrument, and an International Reply Coupon. The packages were sent out in the first three months of 2003 as people agreed to participate; responses were still arriving as this paper was being prepared.

The original research design called for the evaluators to be paid an honorarium for their work. The reason for this was the amount of work involved in reading, analyzing and evaluating the five research articles, as well as in commenting on the evaluation. Unfortunately, an expected source of funds for the honoraria did not materialize. The possible implications of this for the pilot project will be discussed in discussing the results of the data analysis.

Data Analysis

Because the research was still proceeding as this paper was being written, data collection had not completed by mid-March 2003. This meant that though data analysis was being done as the responses arrived from the evaluators, the material presented here is in very preliminary form. More information will be provided in the conference presentation itself. The data analysis strategies include a presentation of the rankings assigned to the articles by the evaluators, and content analysis of the comments made by the evaluators. Among other things, the content analysis will use as a framework, the four approaches to quality that were identified through the literature review.

Table 2: Rankings of the Five Research Articles by the Evaluators

Article	Evaluators with specialist knowledge of school librarianship: E1 E2 E3 E4 E5 E6 E7 E8 E9 E10							Evaluators with no specialist knowledge of school librarianship E11 E12 E13 E14 E15 E16 E17 E18 E19 E20						
	A	5							5	5	5	5		
B	4							3	3	3	1			
C	2							4	2	1	3			
D	1							2	1	3	4			
E	3							1	4	2	2			

Table 2 shows the rankings of the five research articles by each of the experienced evaluators. The rankings of evaluators with specialist knowledge of school librarianship are presented separately from those of the evaluators with no specialist knowledge of school librarianship. As the data collection instruments are returned, it is anticipated that a better picture will emerge of the levels of agreement among the evaluators about the ranking of the five articles. In addition, the analyses of the comments about the process itself should shed light on the ways in which quality is evaluated, for example in relation to the approaches to quality that were identified in the literature review.

Discussion

It is already clear that there are problems with the methodology employed in this pilot study - not that the methodology is inappropriate for the problem, but rather that it is impractical as a methodology. The experienced research evaluators were busy people and the reading and evaluation of five articles required a considerable amount of work. Informal discussions with some of the evaluators after their work was received, suggested that an honorarium or similar recognition of their work would have made a difference. An alternative could have been the strategy adopted by Lee *et al.* (2002), of training a group of evaluators specifically for the task. However, short-term training cannot replace experience, which may play an important part in the evaluation of research articles. There are indications that many people believe that it does play a part; for example, the research journals use referees with experience of the topic, experience of the methodology, and experience in the evaluation of research, as do universities when research theses are being assessed.

Despite the problems, the results of this pilot study will inform the next stage of the "Research and Researchers in School Librarianship" project as a whole – a survey of the current active researchers in the field of school librarianship. Among other things, the survey instrument will address issues of research quality, as understood by the researchers. It will also provide for the collection of data about their experiences of research evaluation and their perceptions of the problems associated with evaluating research quality. It is expected that the pilot project will identify issues that can be explored further using quantitative strategies in this survey. In addition, depending on the outcome of the pilot study, the methodology used in it may be used again in further investigations of issues associated with research quality.

One of the aims of the larger research project of which this pilot study is a part, is to investigate further the conclusions of a previous study (Clyde, 2002, p.68) of "Research and Researchers in School Librarianship". One of those conclusions was that "the quality of the research that is being published in the field of school librarianship [is] an issue that has to be faced", and the pilot study was designed to begin the investigation of issues associated with research quality. It was assumed that "if we expect that the profession's research will influence decision-makers", then that research had to be perceived to be of good quality; in other words, perceptions or assumptions about the quality of the research might be a barrier to the influence of research.

Unfortunately, the literature review carried out for this pilot study suggests that more work may be needed before a direct relationship between research quality and its impact on decision-makers can be assumed. For example, a study carried out in the early 1970s suggests that this relationship might be more complex than is generally thought (Asher & Vockell, 1973). A group of researchers assessed the quality of 102 research documents from ERIC, while a group of educational decision makers evaluated the utility or applicability of the documents in the educational setting. "Results showed that the researchers rated the overall quality of the ... documents as low, but that their acceptance by decision-makers was high. Decision-makers with less research sophistication tended to overrate the quality of the documents..." (Asher & Vockell, 1973). Nevertheless, this study does not tell us whether or not the decision makers actually used this research (or any research) in making decisions. On the other hand, there is a great deal of concern among school librarians at present that what they consider to be quality research is being ignored by educational decision makers, and that budgets for school library services are being cut despite this research evidence. Some of the cuts to school library budgets are coming even in places, such as Canada and Colorado (USA), where research has been done to show the connection between the academic achievement of school children and their access to school library services (CBC News, 2002; McPherson, 2002). Further research is recommended, so that we have a better understanding of the relationship between research quality and the adoption of the results of the research in decision-making and practice.

References

- Asher, William & Vockell, Edward (1973). *Information quality and educational decision making: Final report*. Lafayette, IN: Purdue Research Foundation.
- Blake, Virgil L.P. (1996). The perceived prestige of professional journals, 1995: A replication of the Kohl-Davis study. *Education for Information*, 14, 157-179.
- Calvert, Philip J. & Shi Zengzhi (2001). Quality versus quantity: Contradictions in LIS journal publishing in China. *Library Management*, 22(4-5), 205-211.
- CBC News (2002). Coalition says there's a crisis in Canada's school libraries. CBC News Online. Retrieved March 13, 2002 from <http://www.cbc.ca/stories/2002/03/11/libraries020311>
- Clyde, Laurel A. (Ed.) (1996). *Sustaining the vision: A collection of research articles and papers on research in school librarianship*. Castle Rock, CO: Hi Willow for the International Association of School Librarianship.
- Clyde, Laurel A. (2001). Behind the inspiring connections: Research and researchers in school librarianship. A progress report. In P. Hughes & L. Selby (Eds.), *Inspiring connections: Learning, libraries and literacy, Proceedings of the Fifth International Forum on Research in School Librarianship... Auckland, New Zealand, 9-12 July 2001* (pp.65-77). Seattle, WA: International Association of School Librarianship.
- Clyde, Laurel A. (2002). Developing the knowledge base of the profession: Research in school librarianship. In D. Singh, A. Abdullah, S. Foneska & B. de Rozario (Eds.), *School libraries for a knowledge society: Proceedings of the 31st Annual Conference of the International Association of School Librarianship... Petaling Jaya, Malaysia, 5-9 August 2002* (pp.55-75). Seattle, WA: International Association of School Librarianship.
- Clyde, Laurel A. (2003). Continuing professional education for the information society. *IFLA Journal*, 29(1), [in press].
- Garfield, Eugene E. (1979). *Citation indexing: Its theory and application in science, technology, and humanities*. New York, NY: John Wiley.
- Gehanno, J. & Thirion, B. (2000). How to select publications on occupational health: The usefulness of MEDLINE and the impact factor. *Occupational and Environmental Medicine*, 57, 706-709.
- Giles, M., Mizell, F., & Patterson, D. (1989). Political scientists' journal evaluation revisited. *PS: Political Science and Politics*, 22, 613-617.
- Hansen, H.F. (1996). Evaluation of research: The Danish experience in international perspective. *Biblioteksarbejde*, 48, 7-18.
- Harter, Stephen P. (1996). The impact of electronic journals on scholarly communication: A citation analysis. *Public-Access Computer Systems Review*, 7(5). Retrieved January 29, 2003 from <http://info.lib.uh.edu/pr/v7/n5/hart7n5.html>
- Haycock, Ken (1994). Research in teacher-librarianship and the institutionalization of change. In *23rd annual conference, International Association of School Librarianship, Selected papers, School of Library and Information Science, University of Pittsburgh, Pittsburgh, Pennsylvania, July 1994* (pp.94-103). Pittsburgh, PA: International Association of School Librarianship.
- Henri, James & Freeman, Ashley (1998). Australian research in the field of teacher librarianship: An exploratory study. *Access*, 12(2), 29-31.

- Hernon, Peter (1999). Research in library and information science - Reflections on the journal literature. *The Journal of Academic Librarianship*, 25(4), 263-266.
- Institute of Scientific Information (2002a). ISI Master Journal List. Retrieved March 22, 2003 from <http://www.isinet.com/cgi-bin/jrnlst/jloptions.cgi?PC=master>
- Institute of Scientific Information (2002b). Journal Selection Criteria. Retrieved January 29, 2003 from <http://www.isinet.com/isi/journals/jsel.html>
- Katzer, Jeffrey (1989). ALA and the status of research in library/information science. *Library and Information Science Research*, 11, 83-87.
- Katzer, Jeffrey, Cook, Kenneth H., & Crouch, Wayne W. (1998). *Evaluating information: A guide for users of social science research*. 4th ed. Boston, MA: McGraw-Hill.
- Kohl, D.F. and Davis, C. (1985). Ratings of journals by ARL directors and deans of library and information science schools. *College and Research Libraries*, 46(1), 40-47.
- Lee, Kirby P., Schotland, Marieka, Bacchetti, Peter, & Bero, Lisa A. (2002). Association of journal quality indicators with methodological quality of clinical research articles. *The Journal of the American Medical Association*, 287(21), 2805-2808.
- Lowi, T.J. (1992). The state of American political science. *American Political Science Review*, 86, 210-215.
- MacAuley, D. (1994). READER: An acronym to aid critical reading by general practitioners. *British Journal of General Practice*, 44, 83-85.
- MacRoberts, M.H. & MacRoberts, B.R. (1989). Problems of citation analysis: A critical review. *Journal of the American Society for Information Science*, 40(5), 342-349.
- McClure, C. & Bishop, A. (1989). The status of research in library/information science: Guarded optimism. *College and Research Libraries*, 50, 127-143.
- McPherson, Keith (2002). Stop the gutting of Canadian school libraries. *Feliciter*, 48(6), 260-262.
- Murphy, Penelope S. (1994). Research quality, peer review and performance indicators. *Australian Universities Review*, 37(1), 14-18.
- Nicolaisen, Jeppe (2002). The J-shaped distribution of citedness. *Journal of Documentation*, 58(4), 383-395.
- Nkereuwem, E.E. (1997). Accrediting knowledge: The ranking of library and information science journals. *Asian Libraries*, 6(1/2), 71-76.
- Ophhof, T. (1997). Sense and nonsense about the impact factor. *Cardiovascular Research*, 33, 1-7.
- Pálsdóttir, Gu-rún, Árnadóttir, Ingibjörg, Sverrisdóttir, Ingibjörg, Blöndal, Ragnhildur, & Clyde, Laurel A. (1997). Published research about library and information science in or related to Iceland. *Nordic Yearbook of Library, Information and Documentation Research*, Oslo: Novus forlag, 85-108.
- Pirsig, Robert M. (1975). *Zen and the art of motorcycle maintenance*. London: Bantam.
- Plato (360 BC). *The Republic*. (Translated by Benjamin Jowett). Retrieved September 9, 2002 from <http://classics.mit.edu/Plato/republic.7.vi.html>

Seglen, P.O. (1997). Why the impact factor of journals should not be used for evaluating research. *British Medical Journal*, 314, 498-502.

Smith, Andy (2001). Never mind the width, Feel the quality: Improving VET research in Australia. In *Research to reality: Putting VET research to work. Proceedings of the Australian Vocational Education and Training Research Association Conference, Adelaide, Australia, March 2001*, <http://www.avetra.org.au/PAPERS%202001/a%20SMITH.pdf>

Society for Research in Serials Work in Libraries of Beijing Universities and Colleges and Beijing University Library (2000). *A guide to the core journals of China*. 3rd ed. Beijing: Peking University Press.

Testa, James (2002). The ISI ® Database: The Journal Selection Process. Retrieved January 29, 2003 from <http://www.isinet.com/isi/hot/essays/selectionofmaterialforcoverage/199701.html>

Wandt, E. (Ed.) (1965). *A Cross-section of educational research*. New York, NY: McKay.

The Author

Dr L. Anne Clyde is currently Professor and Chair of the Library and Information Science Department at the University of Iceland. An Australian citizen, she worked in schools, school libraries and universities in her home country before moving abroad, initially to Canada (where she worked at the University of British Columbia). Consultancies have taken her to other countries, among them Namibia and Latvia. She is the author of several books related to school librarianship, including *School Libraries and the Electronic Community: The Internet Connection* and *Managing InfoTech in School Library Media Centers*, and is a regular contributor to professional and research journals. Since 1994 she has been Webmaster for IASL. Email: anne@hi.is

Breaking Barriers with Student-Centred Teaching and Learning Using Library Books in the United States' Poorest Schools

Dr. Eliza T. Dresang
and

Dr. M. Bowie Kotrla
School of Information Studies
Florida State University
USA

An analysis of a random sample of the 2930 applications for library books to a private U.S. Foundation from schools having 75% or more of students on free or reduced lunch identifies characteristics of these poorest schools and demonstrates how they would use the newly acquired books in relation to student and collection needs. Results reveal the impact of national and state legislation, the widespread use of the Accelerated Reader System, and the need for bilingual and multicultural books. These libraries appear more focused on improving student achievement test scores than on promoting general information literacy.

Purpose of the study

Lack of academic success in schools of children living in poverty and accompanying inadequate library resources are issues that all countries potentially have in common. An ongoing grant program by a private Foundation in the United States¹ is attempting to address this situation by providing schools with funds to purchase library books. The goal of the Foundation is to promote academic achievement and to help develop a life-long love of reading for students who may otherwise fail in school and life. The Foundation solicited its first round of applications in 2003.

According to the most recent data (1999-2000) from the National Center for Education Statistics (NCES), in the United States there are 112,135 schools serving 50.7 million students; school libraries/media centers are in 84.3% (94,529) of the schools (U.S. Department of Education, Center for Education Statistics, 2002). Of the students served, 35.7% (18 million) are eligible for the government's Free and Reduced-Price Lunch Program (FRL)² ; 82.6% (92,623) of the schools have students participating in the program (U.S. Department of Education, National Center for Education Statistics, 2002). In the current grant competition, the application clearly stated that preference would be given to those with 75% or more of students eligible for FRL. The response to this initial round was a total of just over 6000 applications, 51% of which fell into the 75% or above FRL eligibility range. Awards were up to USD 5,000, an amount that far exceeds most annual budgets of the applicants studied.

The purpose of this study is to analyze the results of competition for the applicants with more than 75% of children on FRL. The applications present an unprecedented opportunity to observe documented need in the poorest school libraries throughout the United States and to ascertain how these schools would use a one-time infusion of funds.

Background to the study

The relationship between poverty and reading success

Poverty in the United States is a barrier to achievement in school and life-long enjoyment of reading. Children under 18 comprise 35.6% of the over 32.9 million residents of the United States who live below the poverty line (U.S. Census Bureau, 2002). Children from low-income families score 27 points below the mean reading level score for

all students. Students from wealthy families score 15 points above the average (U.S. Department of Education/National Center for Education Statistics, 1993).

What barriers to reading achievement exist for poorer children?

Children from low-income families perform poorly on reading tests because they do not have access to an adequate supply of books to read at home as well as at school. In 1996 in the U. S., approximately 61% of low-income families had no books at all for the children in their homes (U.S. Department of Education, 1996). Not only at home, but ironically, also in classrooms and libraries, poorer children have been found to have less access to books – for a variety of reasons.

Both classroom research (Allington, 1996; Duke, 2000) and library system research (Neuman, 2002) demonstrate that even when the environment is relatively print rich, restrictions placed on poorer children due to federal, state, and local school or classroom policies give them less intellectual and physical access to books, including less time with a teacher or librarian and fewer hours to spend reading. Other studies (Neuman, 2001; Smith & Kraschen, 1997; Neuman & Celano, 2001) support the evidence of a direct relationship between low income and low access to books.

What difference does a print rich environment make?

Two seminal studies by Elley (1983, 1992) provide substantial evidence that students with access to books (in home, community, school, and book stores) progress best in reading comprehension. Across cultures, Elley (1992) found that large school libraries, classroom libraries, access to books at home, silent reading and reading aloud by teachers made the difference between high-scoring and low-scoring countries. This importance of a print rich environment for reading success reaches down to preschool children (Neuman, 2001).

Four decades ago, Gaver (1963) established a relationship between the adequacy of school library collections and student achievement in reading. Recent research focused specifically on school libraries has demonstrated that a good ratio of books to students in school libraries, when used in collaboration with teachers for student-centred teaching and learning, correlates positively with higher reading scores on state reading tests, even when controlling for the poverty level of the community (Lance, 2002). Lance *et al.* (1993) demonstrated a correlation between higher test scores and increased spending for library media in Colorado. In the decade that has followed he and others have built upon the knowledge gained in the first Colorado study, with studies in Alaska, Iowa, Massachusetts, Oregon, Pennsylvania, Texas, and New Mexico (Library Research Services, 2003). Krashen (1995) documented, in each of the U.S. states, a significant positive correlation between the 1992 fourth-grade reading comprehension scores on the National Assessment of Education Progress (NAEP)³ and the number of books per student in school libraries, regardless of how much money each state spent on education per pupil.

Research Questions

- What are the demographic characteristics of students in the poorest schools in the United States and how do these schools compare to all schools in the U.S.?
- How do schools in the United States with the most needy children perceive children's needs for books?
- How do poor schools document the needs in their book collections and what they are?
- What use do these schools propose to make of books to address student and collection needs?
- Do schools propose uses of the books that promote understanding between cultures?
- How do poor schools perceive possible outcomes of their proposed use of books in terms of student achievement and life-long love of reading?
- How student-centred are the proposals?

Methodology

A total of 5701 applications (see Appendix I) were received through the Foundation web site of which 2930 (51%) fell in the poverty range targeted by the Foundation. Not included here are 300 sent via regular mail. Using 75-100% of students FRL-eligible, is a much more stringent level of poverty than is required by other grant programs for schools that consider the student neediness.⁴

From this poorer 51% of the total applicant population, a sample of 100 applicant schools were selected using the random numbers generating feature of Excel®. The 100 schools in this sample (mean=87.25, S.D.=8.27) did not differ significantly (student's $t=0.08$, $p=0.93$) in percentage of FRL-eligible students from the underlying population of 2930 (mean=87.32, S.D.=8.05).

Schools were grouped by grade level into elementary schools (preK-5, ages 5-10) and secondary schools (6-12, ages 11-18). Schools also were grouped by state into four geographical regions as defined by the U.S. government: Northeast, Midwest, South, and West (U.S. Government Fedstats, 2003). Job titles were grouped into 2 categories (Library staff and Other) depending on whether the person identified him or herself as a librarian, or someone with non-library responsibilities.

School setting and student body ethnicity data were obtained from the Common Core of Data at the National Center for Education Statistics (NCES) (Gross, 1999). The nine NCES categories for setting were collapsed into 3: urban, suburban, and rural. In some schools, the student body consisted predominately (at least 85%) of a single ethnic group. In others, no single group predominated; these were termed "multiethnic" schools.

Students' t-tests, analyses of variance (ANOVA) for differences among means, and regression analyses to detect relationships between variables were performed on the number of students, the number of books, and the current year's book budget.

Chi-square tests for relationships between variables and homogeneity of distributions, Spearman' correlations for assessing the relationship between variables, and Kruskal-Wallis tests for homogeneity of medians were performed on the variables of region, setting, ethnicity, special program use, grade level, and responsible person. In order to determine whether the schools in the sample differed from the entire population of U.S. schools, data on region, setting, ethnicity and grade level were obtained from the U.S. Department of Education (2002). For a brief comparison, a random sample of 100 schools was drawn from the richest quartile (0-24% of students eligible for FRL) of the pool of applicants.

All statistical tests were performed used the Statistical Package for the Social Sciences (SPSS®). The open-ended responses to questions were imported into NUD*IST,® a tool for performing qualitative analyses of text.

Results and Analysis

Quantitative results describe "what" the schools are like but do not answer the question "why". The 94 qualitative themes and issues identified provide another perspective on these schools, and focuses more on the "why" and "how" linked to the "what" of the quantitative profiles. Only the most salient themes are chosen for this initial analysis. Throughout the analysis, attention is paid to how student-centred applicants are.

Demographic characteristics of some of the poorest schools and students in the United States.

Students

The sample of 100 schools with 75-99%⁵ of students eligible for FRL included 71% elementary schools and 28% secondary schools. The one comprehensive school (K-12) in the sample was dropped from the analysis. This proportion of elementary to secondary to comprehensive schools approximates the overall proportion of 69% elementary to 21% secondary (with 10% comprehensive) in the U.S. regardless of poverty level (U.S. Department of Education, 2002). In the sample, the mean number of students per school was 552.96 (N=100, S.D.=288.5), whereas the overall U.S. average is 451.88 students per school (U.S. Department of Education, 2002). Data to explain this 100 student per school difference are not available; it may be that schools serving the poorest students are larger or it may be that the difference is attributable to the time periods during which the data were collected (U.S. data apply to 1999-2000, sample data apply to 2002-2003). There was no significant difference between the poorest and richest samples in mean size of student body.

The proportions of predominate ethnic groups in schools in the sample appear to deviate greatly from proportions of ethnic groups in the overall U.S. population of school-aged (5-17 years of age) children (Annie E. Casey Foundation, 2003)

Table 1:

Ethnic Group	Schools in Sample	Overall U.S. Population of School-Aged Children
Native American	3.0%	1.2%
Asian American	0.0%	3.6%
African American	22.0%	15.2%
Hispanic American	14.0%	16.2%
White	7.0%	69.1%
Multiethnic/Other	51.0%	10.9%
Missing data	3.0%	0.0%
TOTALS	100.0%	NA

Percentages of ethnic groups in the sample of poorest schools compared to the percentage of ethnic groups in the United States population of school-aged children (5-17 Years). NA: not applicable because the Hispanic American category is not mutually exclusive to the other categories for the overall U.S. data thus the total percentage exceeds 100.

It appears as though the poorest schools disproportionately serve students of color. Statistical methods are inappropriate to test this relationship because of differences in ethnicity data collection: in schools, students are categorized into mutually exclusive categories whereas in the U.S. census, the category “Hispanic” is not mutually exclusive to other categories of race/ethnicity. However, a comparison of the richest sample to the poorest sample of grant applicants reveals a very strong association (Cramer’s V=0.716, p<0.01) of children of color with poor schools (Chi-square=97.40, d.f.=4, p<0.01).

Schools

The settings⁶ of the sample of poor schools differs significantly from those in the population of U.S. schools (Chi-square=18.86, d.f.=2, p<0.01) (Table 2) and from those in the sample of rich schools (Chi-square=38.66,d.f.=2, p<0.01).

Table 2:

Region	Sample	Overall U.S. Population
Urban	56.0%	28.5%
Suburban	19.0%	43.4%
Rural	24.0%	28.1%
Missing	1.0%	0.0%
TOTALS	100.0%	100.0%

Percentages of schools by setting in the sample of poorest schools and in the population of schools in the U.S.

The poorest schools in the U.S. are disproportionately set in urban areas and absent from suburban areas. The distribution of the sample schools among the four geographic regions does not differ from the distribution of the population of schools in the U.S. (Chi-square=3.22, d.f.=3., p>0.05). In the sample, there is a relationship between school setting and geographical region (Chi-square=23.56, d.f.=6, p<0.01).

Table 3:

Region	Urban		Suburban		Rural		TOTALS	
	N	%	N	%	N	%	N	%
Northeast	13	81.3%	3	18.8%	0	0.0%	16	100.0%
Midwest	21	77.8%	3	11.1%	3	11.1%	27	100.0%
South	14	33.3%	9	21.4%	19	45.2%	42	100.0%
West	8	57.1%	4	28.6%	2	14.3%	14	100.0%
<i>TOTALS</i>	<i>56</i>	<i>NA</i>	<i>19</i>	<i>NA</i>	<i>24</i>	<i>NA</i>	<i>99</i>	<i>NA</i>

Distribution of the sample of the poorest schools across region and setting. The percentages given are the percentages within regions. NA = not applicable.

In the south, the largest proportion of poor schools (N=19, 45.2%) is rural, in other regions, the largest proportions are urban.

A comparison of the poorest sample to the richest sample revealed that the person responsible for administration of grant funds is significantly more likely to be a library staff member (89.8%) in wealthier schools than in poorer schools (73.0%) (Chi-square=9.19, d.f.=1, p<0.01).

Book Collections and Budgets

In the sample, the mean number of books was 7,888.81 (N=100, S.D.=4455.6), and the mean book budget for the current year was USD 4,115.58 (N=100, S.D.=3602.4). The number of books in a school's collection varies significantly across setting (F=3.79, p<0.05). Suburban schools (Mean= 8,745.58, S.D.=3335.22) have larger book collections than do urban (Mean=5,989.48, S.D.= 4770.93) or rural (Mean=5665.28, S.D.=4004.63) schools.

The median number of books per student is 14.6 (interquartile range=12.43), less than the 16-25 books per student cited as a desirable standard by the California Department of Education (California Department of Education, 2003). However, this median exceeds the requirements of various regional school accreditation organizations. For example, the Southern Association of Colleges & Schools (SACS) requires 10 books per student in conjunction with size of overall collection (Southern Association of Colleges and Schools, 2000, 2002).

In their biennial surveys of school libraries/media centers, Miller and Shontz (1999) survey school libraries randomly sampled nationwide regardless of poverty level. In three regions of the country, the medians for books per students of schools in the current sample are below the medians of schools most recently surveyed by Miller and Shontz (2000).

Table 4:

Region	Number of Books per Student				Book Budget per Student			
	Miller and Shontz, 2000		Present Study		Miller and Shontz, 2000		Present Study	
	Median	I.R.	Median	I.R.	Median	I.R.	Median	I.R.
Northeast	20	-	16.9	21.6	9.1	-	6.4	4.2
Midwest	18	-	10.0	16.1	7.5	-	5.0	6.7
South	14	-	16.1	8.8	6.9	-	7.6	7.2
West	14	-	11.5	8.8	5.9	-	8.6	11.7

Comparison of number of books per students and book budget per student in the Miller and Schontz (2000) sample and in the sample of the poorest schools. NR indicates that the interquartile range was not reported.

In the South, the median of schools in the present sample is higher than that of the Miller and Shontz (2000) sample.

The median book budget per student was USD 6.68 (interquartile range= 6.66). In two regions, the medians were lower than those of Miller and Shontz (2000) but in the South and the West, they were higher (Miller and Shontz, 2000). The average cost of a children's or young adult book in the United States in 2003 is USD 19.18 (St. Lifer, 2003) thus the poorest schools are not able to provide even one new book per student in the current budget year. Yet this does not differ from the plight of school libraries throughout the United States which has a median per student spending overall of USD 8.09 per student (Miller and Shontz, 2001). It is interesting to note that the richest and poorest samples did not differ significantly either in mean books per student or mean book budget.

The collective picture

Based on the data in this study, we can say that the poorest schools are urban except in the South where the poorest schools are rural. Students of color are over-represented compared to their proportion of the youth population, reflecting the relationship between race (or ethnicity) and poverty. It is not surprising that the median number of books per student is less than the national median in three of the four regions of the U.S. It is surprising that, as a region, the South, with the largest number of poor schools, has more books per student and a higher budget than the U.S. medians. It may be that southern schools have noted the discrepancy and are trying to catch up. It also may be the result of accreditation requirements. The Southern Association of Colleges and Schools (SACS) has only recently raised its standards to require ten books per student. Overall, the size of the collections in this study seems to measure up to most regional and state standards in books per student. However, the amount spent per student is less than one book per student, pointing to aging collections, doomed to get older. The national picture for both the poorest and for all school libraries is not what is considered desirable to support adequately student reading and learning.

The influence of national and state legislation

The impact of the *No Child Left Behind Act of 2001 (NCLB)* demonstrates that the effect of national legislated policy on local conditions is inescapable. The content of these applications affirm that one cannot study school collections without taking into account the national and state political context. The *No Child Left Behind Act of 2001* (U.S. Congress, 2002), signed into law on January 8, 2002, is a reauthorization of the original *Elementary and Secondary Act of 1965 (ESEA)*, which for many years provided large quantities of funds for school libraries. NCLB incorporates far-reaching revisions to previous iterations of this legislation, with a much greater focus on student achievement and school accountability. NCLB has a grant program entitled *Improving Literacy through School Libraries*. Although an important source of support for school libraries, these grants are large and the application requires a considerable amount of time and effort to complete, so this is not a program that ultimately will benefit most of the nation's 94,529 school libraries directly.⁷

Eleven percent of the applicants in the present study mentioned *NCLB* by name in justifying their requests. However, comments referring to specific requirements or programs within *NCLB* were far more common than a general reference, e.g., 239 in the 100 applications referred to students reading at grade level. A provision of the *Reading First* section of *NCLB* is that all children shall read at grade level by third grade and within twelve years all students tested are to be reading at grade (U.S. Department of Education, 2003c). *NCLB* spells out the progressively more severe consequences for schools that do not reach this goal in one to five years. Often, applicants documented the neediness of their student population by stating how many students read below grade level.

The requirement that reading programs be developed from scientifically-based research permeates *NCLB*, including the *Improving School Libraries Through Literacy* program. The emphasis is on phonemic awareness, phonics, fluency, vocabulary, and comprehension, skills that were studied by the National Reading Panel (NRP).⁸ The report of this National Reading Panel (International Reading Association, n.d.; National Reading Panel, 2000) led to inclusion of these five skills as foundational in *NCLB*. Numerous applicants referred to one or more of these skills, particularly fluency and comprehension. Numerous applicants alluded to the achievement tests upon which their students had to improve. Doing well on achievement tests was the most frequently mentioned expectation of the impact of the new books. "Our faculty is very focused on increasing our students' reading achievement, and this funding will help us provide one more resource to our students to promote that achievement," wrote one applicant.

Notably science was the non-fiction collection area most requested in the grant applications. Documented evidence of out-dated science collections appeared repeatedly. “Our science books are so outdated, the potential for our students to fall behind in their achievement is great.” Although achievement testing currently focuses on reading and math, science testing will also be required beginning in the 2007-08 school year (U.S. Department of Education, 2003b). So it is both the age of the collection and the impending need to demonstrate achievement that most likely drive some requests in this area. However, numerous requests cited age in combination with student interests and needs, e.g., science fair projects, so the impending required testing was not universal in applications for science books.

A reason for adding books to the collection, mentioned sometimes in relation to *NCLB*, was a need to meet state standards both for collection size and for achievement goals. “However, because approximately 29% of our students did not meet state standards of proficiency in reading, we need to develop the collection in a direction that will meet the needs of this target group.” *NCLB* allows states to determine what indicates proficiency at a particular grade level, but against whatever level that is, within twelve years all students must perform at a proficient level (U.S. Department of Education, 2003b).

In sum, there is no doubt that the poorest schools in the United States are struggling to improve the reading of their students and that they see library books as a legitimate and necessary means to that end. School personnel are aware of the national legislation and its requirements and that schools will lose both money and students if they fail to participate in prescribed testing or fail to reach the goals set by *NCLB*. No questions about the validity or importance of *NCLB* principles were raised by applicants. Often, these principles were praised, and many applicants demonstrated fervor to attain the goals set for children.

The Use of Computerized Reading Programs with Levels and Quizzes

The most unexpected issue to arise from analysis of the data is the pervasive use, to the extent of dependence on, computerized reading programs that incorporate a way to determine the specific reading level of library books, to assess the reading level of a student, and to test students on their comprehension after reading. Students receive points according to the length and the difficulty of the book. Extrinsic rewards are offered to students as they gain points.

The program that was mentioned most frequently is Accelerated Reader (AR) by Renaissance Learning (Renaissance Learning, 2003a). Special programs other than AR were mentioned too infrequently (N=8) to be included in the analysis. AR was mentioned in 38% of the sample applications, with 139 specific references in the narratives. There is a moderately strong relationship (Chi-square=14.22, 2 d.f., p<0.01) between school setting and the use of the AR program. Rural schools mention using AR more often (N=16, 66.7%) than do suburban (N=9, 47.4%) or urban (N=13, 23.2%) schools.

Table 5:

Region	Urban		Suburban		Rural		TOTALS
	N	%	N	%	N	%	
Mention	13	23.2%	9	47.4%	16	66.7%	38
No Mention	43	76.8%	10	52.6%	8	33.3%	61
<i>TOTALS</i>	<i>56</i>	<i>100.0%</i>	<i>19</i>	<i>100.0%</i>	<i>24</i>	<i>100.0%</i>	<i>99</i>

Use of Accelerated Reader in the sample of the poorest schools by setting. The percentages given are the percentages within settings.

Not all applicants mentioned AR with the same degree of emphasis, so the cumulative number of references is somewhat misleading. A number of schools casually mentioned it at the end, almost as an aside, as one of many reading interventions and ways student success is measured. Many schools did not fixate on the tests, but rather cited AR as promoting student desire to read.

But some applicant schools gave AR so much emphasis that the lack of books to match quizzes was the major thrust of the application. “Our Accelerated Reader program needs to be expanded to include more current titles and replacement books for currently owned quizzes” was a recurring comment. It is not clear why these schools have quizzes with no matching books. Other schools noted that the students will read only books marked AR so they can take quizzes, and that they are ‘out of books’ that students will read. One school noted that only ten percent of the collection was AR books, portraying this as a condition to be remedied. One feature that may account for part of AR’s popularity is its assertion, in line with the national legislation, that it is research-based. A portion of the Renaissance Learning web site is called “Research and Success Stories.” Here one can look for studies according to school or grade level, demographics, and state or country.^{9,10}

AR apparently appeals in a number of ways to those who are struggling for acceptable documentation of reading at grade level. Books are identified by a label that is color-coded to indicate its level. Students locate books at the their identified reading level. Per-student-fee-based proprietary tests, focused on comprehension of facts (Renaissance Learning, 2003c), reveal whether students are making progress. Recalling that NCLB requires student to read proficiently at their grade level provides one clue to the popularity of this reading program.

Another appeal of AR may be its connection to state standards. The AR site provides an analysis of curriculum standards from twenty states, with notes indicating how the AR program addresses specific standards. The introductory material states, “Renaissance Learning recognizes the impact that the standards-based reform movement and high-stakes standardized testing are having on schools and shares the concerns of educators and administrators that students perform well on high-stakes assessments” (Renaissance Learning, 2003b).

Use of the AR Program was mentioned significantly more times (Chi-square=8.86, d.f.=1, p<0.01) by schools with the poorest students than by those with richer ones. Because the narratives for the schools with more affluent students have not yet been analyzed, it is not possible to determine what other differences exist between these two sets of schools. One possible explanation for appeal to the poorer schools may be the *NCLB* requirements that ask schools to report achievement score data by race/ethnicity and economic background (U.S. Department of Education, 2003a). Because of the interaction of ethnicity and poverty, poorer schools may feel a greater pressure to find a ‘fix’ for students struggling with reading at grade level and with scoring well on achievement tests. The packaged product and process offered by AR may provide convenience to administrators, teachers, and librarians who know they must demonstrate progress quickly. Even if other methods of emphasizing reading, such as Sustained Silent Reading (SSR) that guarantee time each day for students to read materials of their choice are equally effective, they are not as prescribed or as tied to testing and leveling of texts as is the AR program. These reasons for AR’s appeal may also explain its popularity among rural schools. In addition to poverty, rural schools may have less access to the district-level supported, mentioned by some applicants, in collection development.

The need for bilingual and multicultural materials

When asked to describe student characteristics and needs, almost all applicants responded with demographics about race and ethnicity. Requests for Spanish and bilingual books occurred in all geographical regions of the U.S. Sixty-nine mentions were made of needs of Hispanic students and the paucity of Spanish language materials. Hispanics are the largest minority group in the U.S. population, having overtaken African Americans. The real impact of this is apparent when applications from states not traditionally thought of as sites for Spanish speaking populations, such as Kentucky and Wisconsin, apply for bilingual books to meet their students’ needs.^{11,12} Schools also requested books by or about African Americans. Needs for books reflecting Asian culture and languages were notably low, but requests for cultural and language books for Native Americans exceeded their representation in the U.S. population (*Table 1*). A number of applicants noted that use of language other than English at home created a need for students to find something familiar, reflecting their own family life and heritage, at school.

In addition to requesting books in two languages or in a language other than English, a number of applicants asked for books that reflect the many cultures of their schools. More schools in the sample were multiethnic (51%) than were predominantly one race or ethnic group. A particular emphasis was put on biographies so that children of color might have role models and to help build self-esteem, but multicultural books were also requested to promote inter-group understanding. A number of applicants specified projects with these books to accomplish this goal.

Lessons Learned

Studying a random sample representative of 3,000 libraries serving poorest children in the United States gave the researchers the opportunity to weave together a 'big picture' that would be impossible to obtain without the kind of data in these applications. One feature of this overview documents the profound, complex needs of schools serving poor children in the U.S. and how books can, indeed, be used to help meet at least part of the need expressed. We have also concluded that the focus of 21st century school library media centers in the United States serving the poorest children differs in some notable ways from the vision articulated in U.S. national guidelines (American Association of School Librarians/Association for Educational Communication and Technology, 1998) and in former standards for school media programs. The change is in emphasis, rather than in fundamental principle. Because we have not analyzed comparative data, we do not know whether our conclusions apply to libraries serving more affluent children.

The children. These applications painted a picture of poverty in principally multiethnic schools in the United States. The needs of these schools and children are colossal, e.g., a school with children speaking 30 languages; a school with teen mothers and child care; schools with children in poor health or with learning disabilities. The U. S. population of poor children is very needy, and the enormity of the cumulative need is unseen by many of the affluent.

Meeting the needs of these students with a wide diversity of books is a huge challenge for librarians and other school staff. As a whole, applicants documented the needs of children and collections and focused on the types of books that might help meet these needs. Staff seem very student-centred in considering both user and collection requirements, although the only area in which student's personal needs or interests were given the same attention as curricular concerns was in relation to race and ethnicity issues.

School staff, however, seem more adept at recognizing the needs and how books might help meet them than they are at selecting or locating appropriate materials. It appears that many of the book selectors are unfamiliar with the small presses or specialized publishers from which books to meet the diversity of needs specified can be obtained. Instead, the applicants sometimes chose to purchase inappropriate resources having limited use for the population identified, e.g., large reference sets for 5-6 year-old children to meet their non-fiction and research needs. Sometimes applicants proposed purchasing books, e.g., bilingual books in specific languages that do not exist in the quantities needed. A distinct gap between recognition of need, identification of types of books desired, and ability to locate those books exists in the schools studied. This was not correlated with whether the selector had library training.

The focus. School libraries have always existed to develop and support the curriculum of the school, to meet the needs of teachers and students, and to foster information literacy leading to life long learning and love of reading. That basic purpose has not changed. What has changed, however, is the direct involvement and responsibility the library has assumed in promoting student achievement as measured by performance on standardized tests and the challenges that are presented in meeting the needs of an enormously diverse and needy cadre of children.

Librarians long have contributed their expertise as members of instructional teams, but often an invisible line has been drawn that removed responsibility from the library staff for students' achievement. If these applications are representative, U.S. librarians are becoming more prominent in having both authority and responsibility for achievement (as opposed to more loosely conceived learning), and the role of library materials has taken on greater importance because they provide students with the information and the reading practice they need to succeed. The pressure seems enormous given ageing collections and a desperate need for up-to-date, accurate, and appealing materials.

This pressure to participate in fostering student achievement has also changed the complexion of book selection and collection development. Librarians often have turned to standard reference sources of 'best books' to help with materials selection. These catalogs for all school levels still are published and revised regularly. Many librarians have shunned use of any such references and instead read books and book reviews to make their selections. In the worse case scenario, library staff simply picked books from publisher's catalogs.

It now appears, however, that librarians or others responsible for the library in the poorest schools in the U.S. are turning to another type of pre-selected list that has a profound effect on book purchase decisions. This change is related to their new focus on student achievement. Many of the applicants in these poorest schools are using lists from

computerized reading programs, lists that accompany state standards, bibliographies that go with specific reading or other curricular programs, or lists from vendors. In addition, there seems to be no recognition in this pool of applicants that books, reading, and writing are changing drastically in the digital age. It is as if the poorer children are missing out on the literary advances (Dresang, 1999).

This new turn in collection development can be looked at in both a positive and a not-so-positive manner. Doubts arise because of the identity and purpose of the list compilers. In the past, committees of professionals put together the 'best book' collections, and there was no reason to believe that any political or economic interest might drive what appeared on those lists. The lists that many of today's selectors for libraries are using come from commercial sources that, in fact, do have a self-interest in what appears on them. Nothing is mandated, and school officials can make their own decisions, but they may not be aware of the factors that influence which books are listed. The choices seem good because they appeal to teachers (and sometimes to children) and they seem to support exactly what is prescribed to learn. The lack of knowledge of specialized sources mentioned in relation to student need reinforces the turn to prepared lists.

All of this is not necessarily bad. It is good for libraries and librarians to have a central role in student learning. It is good for books to match learning needs. This shift in emphasis has come about partly because of the library profession itself. As mentioned above, researchers have worked hard to demonstrate a link between libraries and student scores on achievement tests. Schools have embraced this research as a justification for spending in libraries. The national guidelines web site proclaims "Information Power: Because student achievement IS the bottom line (American Association of School Librarians/Association for Educational Communication and Technology, 1998). An editorial in the March 2003 edition of *School Library Journal* urges librarians to tie their book purchases to student achievement and to become the school experts on *NCLB* (St. Lifer, 2003).

It is not the advice to focus on student achievement as measured by test scores that is problematic, but rather what seems to have become an overly narrow focus for why books are in libraries and how they might be used. It is overlooking what research demonstrates is correlated with student achievement and instead focusing more on a 'direct fix'. Almost no applicants mentioned as a priority that students "pursue information related to personal interest," or "evaluate information critically and competently," or "use information creatively," or "strive for excellence in information seeking and knowledge generation," all of which are among the nine information literacy standards for student learning in the national guidelines for media centers. In the applications, there was little focus on learning how to become information literate when using the materials and intense focus on locating accurate information for a specific task. There was little focus on evaluating or interpreting information, but an intense focus on factual comprehension. The teaching and learning *are* very student-centred and definitely are designed to break barriers for children who live in poverty, but the student-centredness has a very specific academic outcome in view.

This snapshot of school libraries may be transient. But it does appear that those who are to work in 21st century school libraries face new sets of both challenges and opportunities – and have a great potential to help youth achieve.

But lest it be forgotten, a school library is (or used to be) a place to explore – not to get labeled books, but to try new avenues of inquiry and to read widely at varying levels of difficulty. Perhaps it is possible to assume the new mission that is apparent in the libraries examined and at the same time to keep in mind the words of a Supreme Court justice, "A school library is the place where students must always remain free to inquire, to study and to evaluate, to gain new maturity and understanding...to test or expand upon ideas present to them in or out of the classroom" (Board of Education, Island Trees Free School District No. 27, *et al. v. Pico, et al.*, 1982)

Hopefully the goals of student achievement and free inquiry are not mutually exclusive and both will prevail.

Notes

- ¹ The researchers serve as consultants to this Foundation and have full access to the applicants' data and permission to use it for this study. However, for privacy purposes neither the applicants nor the Foundation will be named in this paper.
- ² Poverty in United States schools is often measured by the percentage of students who qualify for free or reduced price lunch (FRL). Children from families with incomes at or below 130 percent of the current U.S. poverty level for a family of the size of theirs are eligible for free meals and those in families with incomes from 130-185 percent of the current poverty level are eligible for reduced price lunches.
- ³ The National Assessment of Educational Progress (NAEP), conducted for the past thirty years, and sometimes called "The Nation's Report Card," is the only measure of student achievement on which students from all states can be compared (U.S. Department of Education, National Center for Education Statistics, National Assessment of Educational Progress, 2003)
- ⁴ The Gates Foundation provides funds to schools with 10% of the students eligible for FRL. A government grant program, *Literacy Through School Libraries* (U.S. Congress, 2002), targets schools with 20% of the students eligible for FRL.
- ⁵ The application blanks were set to receive two-digit numbers so those schools with 100% of eligible students were recorded as having 99% eligible in the same category as those who did have 99%.
- ⁶ Setting here is used as it is in the NCES data to mean urban, suburban, or rural. Region refers to geographic region.
- ⁷ In the first competition, 1000 libraries applied and 100 received awards of an average \$75,000. As this paper is written, the U.S. Congress is considering raising the appropriation to \$100 million.
- ⁸ Some scholars challenge the conclusions of the NRP (Krashen, 2003b, NoChildLeft.Com, 2003).
- ⁹ Renaissance Learning serves an international community with offices in Canada, England, New Zealand, Australia, and Scotland. Schools in other countries have adopted the program.
- ¹⁰ The debate over the effectiveness of AR is heated and extensive, with proponents and opponents citing numerous research studies to support their assertions. One comprehensive critique of the research that is cited on the AR web site finds current investigations inconclusive (Krashen, 2003a).
- ¹¹ From the applicants, one might deduce that the controversy over bilingual education, e.g., in the states of California and Arizona, resulting in legislation to severely curtail it, has not permeated the nation as a whole.
- ¹² The number of Hispanic children in various states of the U.S. can be seen in census data displayed by the Annie E. Casey foundation (2003).

References

Allington, R. L. & Guice, S. L. (1996). Something to read: putting books in their desks, backpacks and bedrooms. *Yearbook (63rd Annual Claremont Reading Conference)* (pp. 1-16). Claremont, CA: Claremont University.

American Association of School Librarians/Association for Educational Communication and Technology. (1998). *Information power: Building partnerships for learning*. Chicago: American Library Association. Retrieved March 29, 2003 from http://www.ala.org/aasl/ip_implementation.html

Annie E. Casey Foundation. (2003) *Kids count: 2000 census data online*. Retrieved March 29, 2003 from www.aecf.org/cgi-bin/aecensus.cgi?action=profileresults&area=1&printerfriendly=0§ion=2#11

Board of Education, Island Trees Free School District No. 27, et al . v. Pico, et al. (1982). *Board of Education V. Pico*, 456, U.S. 853. U.S. Supreme Court. Retrieved March 29, 2003 from <http://caselaw.lp.findlaw.com/cgi-bin/getcase.pl?navby=case&court=US&vol=457&invol=853>

California Department of Education (2003). *Statistics about California school libraries*. Retrieved March 27, 2003 from <http://www.cde.ca.gov/library/libstats.html>

Dresang, E. T. (1999). *Radical change: Books for youth in a digital age*. New York: H.W. Wilson.

- Duke, N. (2000). For the rich, it's richer: Print experiences and environments offered to children in very low-and very high-socioeconomic status first-grade classrooms. *American Educational Research Journal*, 37(2), 441-478.
- Elley, W. B. (1992). *How in the world do students read? The IEA study of reading literacy*. The Hague, The Netherlands: International Association for the Evaluation of Educational Achievement.
- Elley, W. & Mangubhai, F. (1983). The impact of reading on second language learning. *Reading Research Quarterly*, XIX, 53-67.
- Gaver, M. (1963). *Effectiveness of centralized library service in elementary schools*. Brunswick, N.J.: Rutgers University Press.
- Gross, M. (1999). Imposed queries in the school library media center: A descriptive study. *Library & Information Science Research*, 21, 501-521.
- International Reading Association. (no date). Summary of the (U.S.) *National Reading Panel Report "Teaching children to read"*. Retrieved March 29, 2003 from <http://www.reading.org/advocacy/nrp>
- Krashen, S. (2003a). The (Lack of) Experimental evidence supporting the use of accelerated reader. *Journal of Children's Literature*. [in press]
- Krashen, S. (2003b). False claims about phonemic awareness, phonics, skills vs. whole language and recreational reading. Retrieved May 23, 2003 from <http://www.nochildleft.com>
- Krashen, S. (1995). School libraries, public libraries, and the NAEP reading scores. *School Library Media Quarterly*, 23, 235-237.
- Lance, K. C. (2002). What research tells us about the importance of school libraries. *The White House Conference on School Libraries*. Washington, D.C.: Institute for Museum and Library Services.
- Lance, K. C. et. al. (1993). *Impact of school library media centers on academic achievement*. San Jose, CA: Hi Willow Publishing.
- Library Research Services. (2003). *Research and statistics about libraries*. Retrieved March 11, 2003 from http://www.lrs.org/School_lib.html
- Miller, M. L. & Shontz, M. (2001). New money, old books. *School Library Journal*, 47(10), 50-62.
- Miller, M. L. & Shontz, M. (2000). Location is everything. *School Library Journal*, 46(11), 50-60.
- Miller, M. L. & Shontz, M. (1999). How do you measure up? *School Library Journal*, 45 (10), 50-59.
- National Reading Panel. (2000). *Teaching children to read: An evidence-based assessment of the scientific research literature on reading and its implications for reading instruction*. Washington, D.C.: National Institute of Child Health and Human Development, National Institute for Literacy, U.S. Department of Education. Retrieved March 30, 2003 from <http://www.nationalreadingpanel.org>
- Neuman, S. B. (2002). The Role of school libraries in elementary and secondary education. *The White House Conference on School Libraries*. Washington, D.C.: Institute for Museum and Library Services.
- Neuman, S. B. (2001). Books aloud: A campaign to "put books in children's hands." *The Reading Teacher*, 54(6), 550-557.
- Neuman, S. & Celano, D. (2001). Access to print in low-income and middle-income communities. *Reading Research Quarterly*, 36(1), 8 - 28.

NoChildLeft.com (2003). Retrieved March 29, 2003 from <http://www.nochildleft.com>

Renaissance Learning (2003). *Accelerated Reader*. Retrieved March 29, 2003a from <http://www.renlearn.com/ar/default.htm>

Renaissance Learning (2003). *Take a sample quiz!* Retrieved March 31, 2003c from www.renlearn.com/ar/arquizzes/htm/default.htm

Renaissance Learning. (2003). *Accelerated Reader: Florida state standards alignments pre-kindergarten through grade twelve*. Retrieved March 29, 2003b from http://www.renlearn.com/fundingcenter/FL/FL_AR_030102.pdf

Smith, C & Krashen, S. (1997). Difference in print environment for children in Beverly Hills, Compton, and Watts. *Emergency Librarian*, 2(4), 8-9.

Southern Association of Colleges and Schools. Commission on Elementary and Middle Schools. (2002) *Checklist of Standards for the Accreditation of Elementary Schools, 2002-2003*. Retrieved March 27, 2003 from <http://www.sacs.org/elem/standards/elem.pdf>

Southern Association of Colleges and Schools, Commission on Secondary and Middle Schools. (2000) *Accreditation standards 2000*. Retrieved March 27, 2003 from http://www.sacs.org/pub/sec/Accreditation_Standards_2000.pdf

St. Lifer, E. (2003). Average book prices 2003: Where is your opportunity? *School Library Journal*, 49(3), 11.

U.S. Census Bureau. (2002) Table 1. *Age, sex, household relationship, race and Hispanic origin - poverty status of people by selected characteristics in 2001*. Retrieved March 11, 2003 from http://ferret.bls.census.gov/macro/032002/pov/new01_003.htm

U.S. Congress. (2002) *No Child Left Behind Act of 2001*. Retrieved March 30, 2003 from <http://www.ed.gov/legislation/ESEA02>

U.S. Department of Education. (1996). *Reading literacy in the United States*. Washington, D.C.:U.S. Department of Education.

U.S. Department of Education. *The facts about. . .measuring progress*. Retrieved March 30, 2003a from <http://www.nochildleftbehind.gov/start/facts/texting.html>

U.S. Department of Education. *Introduction: No Child Left Behind*. Retrieved March 30, 2003b from <http://www.nochildleftbehind.gov/next/overview/index.html>

U.S. Department of Education. *No Child Left Behind: A desktop reference*. Retrieved March 30, 2003c from <http://www.ed.gov/offices/OESE/reference/6c411.html>

U.S. Department of Education. National Center for Education Statistics. (1993). *The condition of education*. Washington, D.C.: National Center for Education Statistics.

U.S. Department of Education, National Center for Education Statistics.(2002). *Schools and staffing survey, 1999-2000*. Retrieved March 26, 2003 from <http://nces.ed.gov/pubs2002/digest2001/tables/dt417.asp>

U.S. Department of Education, National Center for Education Statistics, National Assessment of Educational Progress (2003). *The nation's report card*. Retrieved March 27, 2003, from <http://nces.ed.gov/nationsreportcard/>

U.S. Government Fedstats. (2003). *Mapstats*. Retrieved on February 22, 2003 from www.fedstats.gov/qf

Biographical Note

Dr. Eliza T. Dresang, Professor, Information Studies, Florida State University, U.S.A, and former director of school media services in Madison, Wisconsin has conducted extensive research on young people's access to information, focusing on evaluation of resources and services and information behavior. Her award-winning work, *Radical Change: Books for Youth in a Digital Age* (NY:Wilson, 1999) has been cited by researchers in many countries. Active in the American Library Association, she has chaired the National School Library Media Program of the Year Committee (American Association of School Librarians) and currently chairs the Newbery Award Committee (Association of Library Service to Children). Email: edresang@mailier.fsu.edu

Dr. M. Bowie Kotrla, Associate in Information Practice, Florida State University, U.S.A. obtained her doctorate in Biology and conducted research in biometrics and parasitic disease for almost two decades. After obtaining a second Master's degree, she joined the faculty at the School of Information Studies at F.S.U. where she teaches research methods and database management. Her research interests concern issues of access to information by children and young adults. She chairs the Intellectual Freedom Committee of the Association of Library Service to Children, a division of the American Library Association.

Appendix 1: Application

Cover Sheet

The mission of the Foundation is to support the education of our nation's children by providing funds to update, extend, and diversify the book collections of America's school libraries. In doing so, the Foundation will provide students increased opportunity to learn to read, to become better readers, and to advance academically.

General guidelines:

- The Foundation will make grants of amounts up to \$5,000 to school libraries; funds are to be used to update, extend and diversify the book collections of those libraries.
- Any school may apply, but priority for grants will be given to those schools in which 75-100% of the school population receives free or reduced lunch.
- Applications may be submitted on-line (preferred) or in print form. The form must be received prior to the close of business at 5:00 p.m. (EST), February 28, 2003, for consideration.
- Each school may submit no more than one (1) application per grants cycle.
- On-line applications will be received through the Foundation website.

Applicants will be notified of receipt of the grant application; awards will be made on or before May 15, 2003.

Deadline for receipt of application: February 28, 2002

You are encouraged to submit your application using the online form; however, print forms will be accepted. The form must be received on or before February 28, 2003, in either electronic or print format. The goal of the Foundation is to provide books to the school libraries and students that most need them. Consequently, all Foundation grants are made to individual schools rather than to school districts, foundations, or other entities. Only one application per school is allowed.

Part One: Information about your school and this proposal

Please give us a description of your school and information on how to contact you.

This grant application was written by:

1. Your Name:
2. Your Title:
3. Your Telephone Number:
4. Your E-Mail address:
5. Are you responsible for carrying out the activities in the grant proposed? Yes No (dropdown)
6. If not, who is responsible? List the name, title, and experience of each person with responsibility for providing library services.

Name	Title	Experience
_____	_____	_____
_____	_____	_____
_____	_____	_____

School Information:

7. Your School Name:
8. Your School District:
9. Your School Mailing Address:
10. Your School Fax Number:
11. Your Principal's Name:
12. What grade(s) does your school include? _____
13. How many students are there in your school? _____
14. How many books are there in your school library? _____
15. Please calculate the approximate number of books per student using the information above. _____
16. What is this year's book budget? \$_____ What is next year's estimated book budget? \$_____
17. Please calculate the book budget per student this year using the information above. _____
18. What percentage of your student body is eligible for free or reduced lunch? You can use feeder school data if this is a secondary school. Priority will be given to schools that have a student body with 75%-100% eligibility for free or reduced lunch. _____
19. Please give a very brief description summarizing how you will use the Foundation award money.
(limited to about 100 words)

Part Two - Your Plan for Foundation funds

The Foundation wants to help you get the books you most need to support student achievement, the curriculum and to develop a love of reading among the students at your school. Please answer each of the following questions to help us understand how you would put Foundation funds to use in accomplishing that goal.

In each case, limit your answer to the space provided. Bulleted lists or outline forms as part of your narrative are acceptable. You must use a 12 point font size with any of the following fonts: Arial, Century Schoolbook, Courier, Georgia, MS Sans Serif, Tahoma, Times New Roman.

1. Why does your school library need this money? (30 points)
 - A. Describe the students your school library serves, e.g. socio-economic status, gender, and age, and their need for the books requested. *(limited to about 250 words)*
 - B. Describe the need or gaps you have identified in your collection and state how this award will be used to meet the need or fill those gaps identified.
Please be specific including both quantitative and qualitative evidence where possible. You might answer by describing a section of your collection that is too small or is out of date, books that are needed for a unique student purpose, books to support a special project, etc. Please remember that these are examples only, not requirements. We want to know what you see as the greatest need in your individual school and why it has such priority status. *(limited to about 250 words)*
2. How will this money be spent to address this need? (40 points)
 - A. Please be specific. The goal of the Foundation is to provide the books you most need to support student achievement, the curriculum, and to develop a love of reading among the students at your school. You might answer by describing your overall collection plan, a special project in your school, a collaborative enterprise with one or more teachers, a joint project with another group, etc. Be sure to tell how you will promote the new materials. Please remember that these are examples only, not requirements.
(limited to about 500 words)
 - B. How much money (up to \$5,000) are you requesting from the Foundation to implement what you describe above? Provide a brief budget outline showing how the Foundation funds will be spent.
(limited to about 150 words)
3. If you receive funds from the Foundation, you will be asked to submit a report describing their use. What do you anticipate will be the effects of using the Foundation grant money? e.g. How does this grant money contribute to instilling a life-long love of reading for your students or help promote student achievement, etc.? How will you determine and report the effects from your use of the grant money? (20 points)
(limited to about 250 words)
4. How much and what kinds of library support do your principal and teachers provide? e.g. librarian/teacher collaboration? type of scheduling? (10 points)
(limited to about 250 words)
5. Is there anything else that you would like for us to know about your school that is NOT included in your responses to the questions above?
(limited to about 100 words)

Statement of Assurance Required

I _____(name of principal), principal of the _____(name of school), hereby certify the accuracy of the information provided in the application. Further, I fully support the submission of this application to the Foundation to support the school library and the project described therein. Further, I certify that funds granted by the Foundation will not be used to supplant (replace) money normally budgeted for the _____(name of school) library program. I understand that these funds are to be used for supplemental funding only.

Date: _____

(Name of school principal)

(Name/title of person responsible for running the school library)

Thank you for your responses.

Because, unfortunately, there is not enough money to fund every worthwhile project, the grant awards committee will have to make some very difficult choices. Decisions will be made by applying the following point values to particular elements of the application. The total number of possible points is 100.

30 points - Description of need

40 points - Proposed use of the Funds

20 points - Evaluation plan

10 points - Principal support

If you receive an award you will be asked to provide a final report within one year from receipt of the grant money.

Public Libraries Stepping Into The Gap? A Study of School Learners' Use of Libraries in a Disadvantaged Community in Cape Town, South Africa**Genevieve Hart**

Senior Lecturer

University of the Western Cape

South Africa

The paper describes an investigation of school learners' use of the two public libraries in a disadvantaged community on the outskirts of Cape Town. Over 850 school learners were interviewed using a structured questionnaire in late October 2002. The study supports claims that public libraries in South Africa are having to compensate for the shortage of school libraries and are playing a crucial role in formal education. It recommends that this reality be recognised by the libraries' governance structures, by provincial and local government authorities, and, above all, by national and provincial education authorities. Questions are, however, asked about the capacity of the public libraries for an enhanced role in information literacy education.

This paper describes an investigation of school learners' use of the two public libraries in a rapidly growing township on the outskirts of Cape Town, which for the purposes of the study has been given the pseudonym Vista. The study will eventually form part of a larger case study of the nine schools of Vista. The aim of the larger case study is to examine the impact of South Africa's new school curriculum, Curriculum 2005, on historically disadvantaged schools, which cannot be assumed to have effective libraries within their walls. It will investigate how the reading and information needs of their learners and educators, including their needs for information literacy education, are being met.

Background and Rationale

According to public library staff none of the Vista schools has a functioning library or a librarian on its staff. In its lack of school libraries Vista is no different from other parts of South Africa. Less than a third of South African schools have any sort of library (Department of Education, 1999). Yet South Africa's new curriculum's shift from rote-learning and examinations towards constructivist resource-based approaches expects schools to engage in independent project and portfolio work.

Given the demands of the new curriculum and given the shortage of school libraries, in the past few years there have been suggestions that South Africa's fairly well-developed public library system might step into the gap and play a more explicitly educational role. At the same time, in public library circles throughout Africa, there have been suggestions that we need a different model of public librarianship from that in the developed world (Sturges & Neill, 1998; Issak, 2000). In the developing world, where school library services are inadequate and where the target population of libraries is largely youth, the argument is that providing for formal education might well be a primary function of public library services. And indeed there is evidence that South African libraries are moving in this educational direction. The annual reports of the large provincial public library governance structures show that they are spending a bigger slice of their budget on educational materials. And at most gatherings of public librarians in South Africa there are calls for increased funds to cope with the pressures of increased school use (Hendrikz, 1998; Leach, 1998).

Increased co-operation between the public library and school library sectors is clearly called for. It has proved difficult, however, to overcome historical barriers between the two sectors. In the Western Cape Province, as elsewhere, each has separate governance and legislative frames. In 1999 UNESCO supported a high-level committee to come up with recommendations on how to promote increased co-operation. Its report (National Committee for Library Co-Operation, 2000), however, has so far had little impact perhaps because, as the report recognises, each sector has been pre-occupied confronting the challenges of stringent budget cutbacks and re-structuring.

One of the models put forward as a possible solution to the problem of the shortage of school libraries is the multi-purpose school-community library (National Education Policy Investigation, 1992; Karlsson, 1996; Le Roux, 2002). The Education Policy Unit at the University of Natal hosted a conference in Durban in 1996 specifically to examine the potential of this kind of joint-use library (Karlsson, 1996). The model apparently received the approval of the national Department of Education, as shown in the draft school library policy documents produced by the Department in the years between 1995 and 1998 (Department of Education, 1998). They assumed that the so-called "one school-one library" model was infeasible and presented a range of alternative models, one being the joint-use library and another being the public library serving a cluster of schools as a combined school-community library. It has to be pointed out, however, that national school library policy is still stalled as the policy documents have still not received ministerial approval.

Existing Research

There have been studies of the educational use of the public library in South Africa as far back as the early 1980s (Van der Walt, 1981; Brooke-Norris, 1986; Niven, 1987). Some of the earlier studies seemed to see the use of the public library by school pupils as a "problem." Their authors perhaps saw the support of formal education as outside its traditional mission. Fourie's study (1994) of the use of a library in a Johannesburg suburb by school learners found that many of her respondents, even those within relatively advantaged schools, preferred to use the public library for their assignments rather than their school libraries. My own survey of 67 children's library staff in Cape Town in 1999 provided evidence of the increased pressures brought about by the new curriculum (Hart, 1999). It concluded that public librarians were taking on an enhanced educational role but in an ad hoc way. Many reported that they were being expected to "step into the gap" and to do the work of school librarians. However there was little evidence of systematic planning or programming or training for this work. Witbooi's survey (2001) of the membership of the two libraries in Kuils River, a suburb close to Vista, found that 37.6% of their members are school learners, the highest proportion of their total membership. Yet she comments that its local authority and management lack awareness of this educational role which is not prominent in the official documents of the public library service. The Education Policy Unit (Natal) has recently published three case studies of innovative library models (Naiker & Mbokazi, 2002), which, it is claimed, might serve to pilot the models suggested in the Department of Education's draft school library policy framework mentioned above (Department of Education, 1998). One of the three cases is a community library in rural Limpopo, the Makhuvu Information Centre, which serves a number of schools. The Centre began in a garage and relies heavily on volunteer student staff.

User Study of Vista Libraries

As mentioned above, the study reported in this paper forms just one part of a larger case study of Vista schools to be undertaken throughout 2003 and 2004.

The new curriculum, Curriculum 2005 (C2005), is widely acknowledged to be resource-based with an emphasis on constructivist independent learning by means of project and portfolio work. On paper, the curriculum holds great promise for school librarianship as it recognises information literacy, the accepted mission of school librarianship, to be a critical outcome of schooling. The teaching methodologies it promotes have shifted from the teacher- and textbook-centred approaches of the past. A pre-requisite for this kind of curriculum would seem to be access to a wide range of learning and information resources. And indeed since its introduction in 1996, South African librarians have continuously warned that schools without libraries will struggle to make the changes the new curriculum demands (Library & Information Association of South Africa [LIASA], 2000). However these warnings have not so far been heeded. The lack of urgency over national school library policy and the deterioration in the position of school libraries even within the more advantaged sectors of our schooling (Stopart, 1995; Leach, 1998; Hart, 2000) indicate perhaps that educationists and policy-makers are not convinced. There is thus a crucial need for solid research evidence to show if

and why the new curriculum requires libraries. Todd (2001) warns that advocacy must depend on "evidence." If they are to receive wider recognition of their role in the new curriculum, then librarians need to provide supporting evidence. The case study will thus document how the schools within Vista, none of which apparently have libraries, are managing the project and portfolio work of C2005.

The study reported on in this paper is thus a preliminary to the other three components of the larger case study. The next phase of the study will document the two public libraries with regard to their services to schools, their capacity, and staff attitudes. The third phase will be a field study of what might be called the "information climate" within the Vista schools. This will involve fairly long term participant observation inside the schools. The final component will be the implementation of a pilot information literacy project within two schools in Vista and the public libraries. The two schools will be chosen in the course of the earlier phases of the case study. Each of the four phases has its own focus and research questions, but all four are interdependent.

The initial user study of the two Vista libraries, described in this paper, aims to document the situation on the ground with regard to the use of public libraries by school learners in a disadvantaged township.

Choice of Site

Case study sites are chosen using a variety of criteria (LeCompte, Preissle & Tesch, 1993). Vista might be said to be a "purposive" choice for a number of reasons. The Joint Education Trust and the University of Western Cape's Community and Higher Education Service Learning Project (CHESP) had already decided to use Vista for its pilot programmes. They had found Vista to be typical of the rapidly growing townships on the periphery of South African cities. Their libraries likewise might be deemed to be reasonably typical of those in Cape Town's townships. The case of Vista might thus provide useful data to inform the debates around public and school libraries in South Africa.

Vista lends itself to the research problem because it has two medium-sized public libraries, each of which serves a manageable number of schools within reach, that is about four or five in the catchment area of each. The membership statistics of the two libraries show that Vista Library has about 2500 child members (under the age of 16) of a total of 8000 members (31%). Vista East Library has about 2500 child members of a total of 6000. Both libraries belong to the same metropolitan sub-structure and to that sub-structure's network of libraries. They thus both report to the same governance structures and policies, although this situation is in a state of flux as Cape Town is in the process of rebuilding its management structures.

The facilities in both the Vista libraries are similar to other township libraries in Cape Town as documented in a study in 1999 (Hart, 1999). There are about 14 staff in the two libraries, with 13 being Afrikaans-speaking and one Xhosa-speaking. Only one or two in each library have any professional librarian or post-school qualification. In common with other Cape Town libraries, the Vista libraries have neither OPACs nor card catalogues available to the public. The switch to computerised systems meant that one or two workstations were supplied for the circulation desk and for the librarian's office. Card catalogues were discontinued. A recent development in Cape Town is the Unicity's SmartCape project which plans to provide public Internet facilities in all the city's libraries. Vista Library is one of the pilot sites and has a bank of six PCs with Internet access. Vista East Library has no computers for public use except for a PC in its small business corner.

Another consideration in the choice of site was convenience. Vista is logistically convenient as its libraries were hosting a number of University of Western Cape (UWC) librarian students throughout the second semester of 2002 and it is quite close to the University campus.

UWC's involvement in Vista came out of the CHESP initiative which had, as mentioned above, identified it as an appropriate site for its pilot service learning programme. The service learning project began with a three day programme in July 2002 that introduced the students to the Vista communities. A panel of youth workers, health workers, police, and social workers had discussed the social issues facing the youth of the area, including high rates of teenage pregnancies, HIV/Aids, gangsterism, and unemployment. They highlighted the prevailing poverty that underlies most of the social problems.

Another constant refrain in the three-day induction programme was the impact of the inherited apartheid town planning on the life of the township. The Vista community is clearly split into two by culture and by language. Vista East library was opened in 2000 in the new Xhosa-speaking section of Vista, while the older Vista library, just a kilometre away, serves the longer-established Afrikaans-speaking so-called Coloured community. The schools in the Vista Library catchment area are older and are ex-House of Representative (HOR) schools. These schools, in the apartheid era, belonged to the so-called Coloured Education Department that managed the schools that Coloured children attended. Although apartheid has gone, its heritage remains in the obvious inequities in facilities across our schools, such as sports fields, halls, and libraries as well as in more intangible school "culture."

The public libraries' hosting of UWC students as part of the CHESP project came from their stated wish to improve their services to the school learners in their communities. Preliminary discussions with library staff uncovered much criticism of the local teachers. Typical complaints were: teachers do not come to the library, they do not inform the library of school projects in good time, and school children are not taught how to use the library effectively. The Vista libraries' staff echoed the comments of the earlier 1999 (Hart) study in also claiming to be "doing the work" of school librarians.

Yet in fact very little is known about the schools' needs. If it is indeed true that the schools lack libraries and resources, the question has to be asked, *how do their educators and learners manage the project and portfolio work required by C2005?* The literature of project work assumes that easy access to such collections is a pre-requisite for such pedagogical approaches.

Research Questions

The four-day investigation of the use of the two public libraries by school learners set out to throw light on the question of how much the Vista libraries are filling the assumed gap caused by the non-existence of school libraries. It asks the following questions:

- How many learners from the surrounding schools are coming to the two libraries?
- Why do learners come to the public libraries?
- What is the educational use by school educators and learners of the two public library branches at present?
- How does this educational function compare in terms of user numbers with the other functions of the libraries?
- Which learners from which schools are using the local library? And for what?
- What other sources of information and resources do the learners use?
- Are there differences in the patterns of use between the two libraries?
- What do the learners need from the library? Does the public library have the required capacity to take on the active educational role that is being suggested?

Methodology

Over the period of four days, Monday to Thursday, in the last week of October 2002, 894 interviews with school learners coming into the two libraries were conducted by 14 senior UWC students, who were enrolled in a BBIBL children's librarianship module, and by myself. Of the total, 414 were in Vista Library and 382 in Vista East Library (three questionnaires failed to identify the library). The students had been placed in the two libraries for some weeks as part of the CHESP service learning initiative. The interview used a structured questionnaire, comprising 16 questions gathering data on learners' backgrounds, their reasons for coming to the library that day, and their broader information seeking behaviour. It had been piloted in another library close to the University that was also hosting UWC students. After the first day a second shorter questionnaire was used for any learner who reported at once that he or she had already been interviewed. By the end of the four days, 89 of these "second round" questionnaires had been collected. They are not, however, included in this paper. The UWC students were instructed to try to interview every school learner coming into the library excepting those not wishing to take part. It soon became clear that it would be impossible to interview every child, and it is estimated that about 80% of the learners in the libraries that week were included. Several questionnaires were subsequently scrapped as the respondents were clearly not school learners. It was decided however to retain the few respondents attending Adult Basic Education and Training (ABET) night classes in a local high school, even though they are some years older than the typical school learner.

The data were then entered on an *Excel* spreadsheet for summary and statistical analysis (where useful). The analysis is reported on in the next section.

Other data were gathered by means of interviews and observation. I conducted preliminary interviews on 12 September 2002 with the managers of the two libraries using a questionnaire evolved in an earlier study of libraries in Cape Town (Hart, 1999). These rather formal interviews were followed by frequent more informal conversations with them and with the other library staff members. The purpose was to document certain key data and to gain insight both into library procedures and staffing and into the services offered to learners. Observation of the two libraries by the UWC students, recorded in their journals as part of the requirements of their BBibI module and by myself in the course of frequent visits to the libraries also added useful insights into the services offered to school learners and into their behaviour inside the libraries. The interviews and observation were analysed and recorded as key themes evolved. Information gathered by means of these interviews and observation is given when judged relevant in the discussion that follows. The exploration of the capacity of the libraries to give an enhanced service to schools is, however, an ongoing process, and its analysis is not a major focus of this paper.

Analysis and Interpretation of Data

Analysis of the completed questionnaires shows how important a role the public libraries are playing in the school life of the learners. The use involves more than one-off visits. Many report that in the course of their school projects they return to the library frequently, with 76 learners claiming to have made seven visits or more for their current project. The mean number of visits is 2.15. (see Table 1)

No. of Visits	Respondents
1	561
2	61
3	52
4	20
5	16
6	13
7 or more	76
Total	799
Median No =	1
Mean No =	2.15
Maximum =	14

Of the 799 respondents, 623 (78%) said that they never use any other library. Twenty-seven (3%) said they also use a school library; 16 use the Bellville Library, the large district central library some kilometres away that is designed to serve the reference needs of the municipal sub-structure that Vista is part of. Others named various public libraries throughout Cape Town, probably those close to their schools.

The figures on access to school libraries are rather ambiguous, however, as in a later question 234 respondents (29%) said that in the past year they had used “books in their school library” for their school work. One respondent in Vista Library gave me a clue towards a possible explanation for the contradiction when he told me he used some “old books” from the library at school but it wasn’t a “real” library. Of the 234 claiming to use books in the school library, 156 (66%) are Vista respondents whose schools can be labelled as ex-House of Representative (HOR) schools that served the so-called “Coloured” population in the era of apartheid education. Many of them have the remnants of the school libraries that were established in the 1980s but that, since the amalgamation of school systems in the mid 1990s, have fallen into disarray (Hart, 2000; Le Roux, 2001). In the past, each of the racially-based education

departments had its own library policies and standard library layouts. The HOR schools' standard primary school library was a small windowless storeroom leading off a classroom. The teacher-librarians and teachers would go into the storeroom to fetch books for the children to work with. Until the ambiguity can be cleared up by visits to the schools this remains the most likely but still speculative answer to the contradiction.

Who Are the School Learners Using the Libraries?

The first section of the questionnaire gathered data on the age, gender, home language, school and school grade of the learners.

The major finding here is the high numbers of learners using the libraries. Over the four days a total of 799 usable questionnaires were completed as well as 89 "second round" questionnaires. Library staff assured us that these numbers are not unusual in the course of the school term, and the experience of the UWC students over a number of weeks confirm this. My photographs document the problems these high numbers bring, especially for the older smaller Vista Library. Vista East Library is only two years old and was built to cope with the large study spaces required by township learners, who often do not have conditions at home conducive to study. Every chair in the afternoons at Vista Library is filled. Large queues form at the single photocopier and large crowds of children congregate around the bank of SmartCape PCs in the centre of the floor in Vista Library. Both libraries seem to adhere to a policy that ejects school learners at 4.30pm every afternoon. This means that use by schools learners is telescoped into a few short hours between the closure of schools from 2.00pm and the 4.30 library deadline. My observations record that both libraries are extremely quiet in the mornings, which are largely used to tidy up the disorder left by the hectic afternoons.

Very few adults are seen in the libraries in the busy afternoons. The dominance of school learner use is not reflected in formal membership statistics of the two libraries given above. The questionnaire did not document formal membership of the respondents but it is probable that many will not be formally registered members as membership requires parents' signatures. Witbooi (2001), in her study of the membership of a library in a nearby suburb, suggests that high levels of adult illiteracy, together with perceptions that the library is for the educated middle class, mean that many children in a disadvantaged community just do not get signed up formally.

There are significant differences in the age groups, grades, and the language groups using the two libraries.

Table 2 Age Split by Library

Library	Age															Total	Mean	
	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20			21
Vista	3	5	11	15	30	44	49	71	57	33	38	27	10	3	3	1	400	13.2
Vista East	1	5	6	14	20	13	37	48	50	35	40	31	20	15	11	5	351	14.4
TOTAL	4	10	17	29	50	57	86	119	107	68	78	58	30	18	14	6	751	13.8

Test Statistic CHI-Squared = 43.8896

P-Value = 0.0001

Table 3 Grade Split by Library

	<i>Grade</i>												
Library	1	2	3	4	5	6	7	8	9	10	11	12	Total
Vista	12	7	14	22	48	42	113	27	42	38	17	13	395
Vista East	11	6	7	14	30	25	69	43	35	44	36	17	337
TOTAL	23	13	21	36	78	67	182	70	77	82	53	30	732

Test Statistic CHI-Squared = 43.8896

P-Value = 0.0001

Vista's users (see Table 2) are significantly younger than Vista East's users with use peaking at Grade Seven and quite sharply dropping after that grade. The bulk of Vista East users, however, are two or three grades senior. The later finding that Vista users' most common use of the library is for projects whereas Vista East's is to do homework might throw light on the age differences. Curriculum 2005, with its ubiquitous project work, was phased in from 1996 beginning with the Foundation Phase. It could be that project work is not yet entrenched in the schools of the younger Vista East. Language and culture, intertwined with South Africa's racially based teacher training of the past, could be contributing factors. In her study of teacher training in South Africa Olën (1996) concluded that only about 25% of South Africa's teachers-in-training had had access to libraries in their schooling. It can be assumed that black teachers educated in the historically disadvantaged sector would make up the majority group with no direct experience of libraries. Inadequate access to libraries might well infer reliance on "chalk and talk" methods and very little direct experience of independent project work. Indeed my own experience is that many teachers in our courses at the University of Western Cape report that they have never done an independent project. Yet they are now being expected to manage research projects in their classrooms. These are crucial questions for the follow-up study within the schools of Vista.

Table 4 Main Languages Spoken by Library Users*

Language	Vista Library	Vista East Library	Total
Afrikaans	272	88	360
English	94	12	106
Xhosa	6	250	256
Afrikaans / English	28	8	36
TOTAL	400	358	758

Test Statistic CHI-Squared = 400.0531

P-Value = 0

* Less frequent languages omitted

A shortage of Xhosa language materials might also play a part in explaining differences in age and in use patterns. The analysis of respondents by home language (see Table 4) confirms the language and cultural divisions within Vista. Vista Library's users are predominantly Afrikaans-speaking, with 272 naming Afrikaans as their primary home language, 94 English, and six Xhosa. Vista East's users are largely Xhosa-speaking, with 250 naming that language as their primary home language, 12 English, and 88 Afrikaans. The follow-up study will need to look carefully at the stock of the two libraries in terms of language and readability level.

The list of schools from which the respondents come makes interesting reading. At the start of the study the librarians in each library had reported that they served four or five schools. Yet the reality is that their school users come from 71 different schools scattered throughout the neighbouring areas. A later question, which asked about use of other libraries, revealed that these children might well also be using the library close to their school. It is clear, however, that many of the children who travel out of their home communities to attend school choose to do their homework in the library close to home.

Despite the range of 71 schools, it is true that each library's user community is dominated by two or three schools. Interviews with library staff had revealed that neither of the libraries before the start of the CHESP project had sustained contact with their local schools. In the preliminary interviews, both sets of library staff claimed that they had tried to get teachers to communicate their assignments and projects but had failed. The Vista East staff were especially critical of the high school just across the road, saying that its educators had nothing to do with the library. Yet that school forms the largest user group for the library. This clearly is something to follow up in the school.

Table 5: Mean Number of Visits by Library and Gender

Library	Vista Library	Vista East Library	Total
M	2.3	2.0	2.2
F	1.6	2.6	2.1
Total	1.9	2.3	2.1

The mean age of males (13.5 and 14.9) was on average greater than females (13.0 and 14.1) in Vista and Vista East respectively.

A t-test for unequal variances was used to test for significant differences between the mean number of visits to each library by gender. At Vista Library males visited significantly more frequently than females ($t = -3.03, p = 0.0026$), whereas the reverse was true at Vista East ($t = 1.99, p = 0.0473$). A possible explanation could be the SmartCape computers at Vista Library that, as will be shown below, seem to be used predominantly by males.

Reasons for Using the Public Library

The question that probed why the learners were in the library that day is the heart of the study. Originally 11 categories were created but these were extended to 16 on analysis of the open-ended question that encouraged respondents to give "other" reasons that might not be spelled out. Table 6 below lists the responses. On average most respondents come in for more than one reason, to do a project and to photocopy for example.

Table 6: Why Did You Come to the Library Today?

Reason	Vista Library	Vista East Library	Total
Work on school project / portfolio	193	134	327
Sit in library to do homework	80	176	256
Use library for assignment	64	135	199
Bring back / take out book	91	106	197
Photocopying	63	94	157
Sit and read	43	84	127
Meet / be with friends	57	67	124
Read info on hobby / interest	8	42	50
Pass time	27	20	47
Use computers	31	7	38
Personal information	7	15	22
Study for Exam	0	19	19
Admin	7	6	13
Help Others	1	7	8
Games	4	2	6
Use Phones	0	2	2
	483	782	1265
Mean no. of reasons per respondent	1.2	2.1	1.6

Analysis of the total for both libraries together shows that the most common reason is to work on a project, the second is to sit in the library to do homework, the third is to use library materials to complete an assignment, and the fourth is to return or borrow a book. The role of the library in the social life of young people is rather striking. Rather a high proportion of the visits involve meeting friends and passing the time.

There are significant differences between the two libraries. Table 6 shows that Vista Library users are mostly in the library to do a project whereas the Vista East Library users are there to do homework without using library materials. This difference might indicate differences in teaching style between the two communities within Vista, each of which has its roots in a different education system. Or it might point to the socio-economic differences. Vista East has a large informal housing settlement. Perhaps what children who live in shanties need most from a library is a chair and table in a light secure room. Spearman rank correlation tests show no positive correlation between the libraries for the main reasons for coming to them. When the top seven reasons are looked at there is Spearman correlation of 0.6786 ($p = 0.0965$), and for the top four reasons the Spearman correlation coefficient is -0.6 ($p = 0.2987$).

The questionnaire gathered information about the project topics being undertaken and about the educators behind them; this will be useful in the next phase of the case study. Given the library staff's rather negative perceptions of educators, it is interesting that 52% of respondents said that their teacher had told them to use the library.

It is striking how little the libraries are used for personal information needs and for information on interests and hobbies. Vista youth face huge social problems and, if it is indeed true that the local schools do not have libraries, it is necessary to ask where do the young people of Vista get information on HIV/Aids, sex education, violence, crime, careers, and, so on. This is another issue that requires follow-up inside the schools.

The data about use of computers by Vista learners have to be viewed against the backdrop of the large national and provincial projects to bring computers to school learners. One of the most often stated goals of the national and provincial education departments in South Africa is to fast-track historically disadvantaged learners into the global information society. Millions of Rands are being spent on providing schools with computers and with Internet access. Two questions in the questionnaire focused on the use of computers. One asked whether the respondent was in the library to use a computer, and another later question asked whether they ever used the Internet at school, home, or in the library as an information source. Only 38 respondents (5%) over the four days said that they had come to the library that day "to use the computers. Only 52 respondents (6%) reported that they sometimes use the Internet at their schools for information. Forty-six respondents (6%) said they use the Internet at home and eighty-five (11%) said that they sometimes use the Internet in the library. It would be sobering perhaps to compare these figures with those from an equivalent group of young people in some of the adjacent middle class suburbs.

Of the 38 respondents coming into the library to "use the computers" over the four days, 27 were male. This confirms my observation and those of the UWC students that very few females use the PCs in the Vista Library. My photographs show that the workstations are constantly surrounded by young men with younger boys stretching over their shoulders to watch. From a distance it is hard to assess what the PCs are being used for. The SmartCape initiative was not the focus of the study, but reports from UWC students and my own observation, as well as comments of library staff, suggest that it is rather isolated from the main business of the library. They are maintained by a community volunteer trained by SmartCape and the library staff rarely go near them. The reference desk in Vista Library has a PC with Internet access but the UWC students reported that this facility is rarely used. If true, this might lend support to one of the findings of my study in 2000 of 67 children's librarians in Cape Town: there was consensus among them that they urgently needed computer literacy and Internet training (Hart, 1999).

Conclusions and Recommendations

The aim of the study was to provide quantitative data that the field study within the schools in 2003 will rely on. The study has uncovered many questions that hopefully the later richer case study will answer. The user study in itself, however, has provided useful data from which conclusions and recommendations can tentatively be made.

The first conclusion is that it lends support to the claim that public libraries in South Africa's disadvantaged townships are indeed "doing the work" of school libraries. The learners rely almost exclusively on the public libraries for their school projects, homework and assignments. It has to be said that in terms of numbers and volume of use, school learners dominate the lives of the libraries.

This reality, however, might not yet be fully accepted by either the libraries or their management structures. The question has to be asked whether the libraries receive adequate support for the role they are playing in the learning and teaching curriculum. The libraries struggle to cope with the numbers of learners that swamp their facilities each afternoon and do not seem to have as yet received recognition for this in terms of staffing and resource provision. Witbooi (2001) concluded in her study of the nearby Kuils River libraries that, while library staff on the ground know they are playing an educational role, this role is not recognised by their management structures and policies. She suggests that libraries' mission statements should reflect what they are really doing.

The Vista study suggests that this reality needs to be communicated forcefully to education authorities. It lends support to the argument that public library facilities and stock need extra financial support from the provincial Education Departments. This kind of provision would be a pre-requisite surely for any more explicit educational function for public libraries. Perhaps it is time for the national library association, LIASA, to intervene and to pick up the work of the National Committee for Library Co-Operation (2000) in which it participated.

The study points to the need for more systematic and programmed contact with the local schools or with at least selected grades and teachers. Perhaps then classes could come to the library in the mornings for a more structured experience. In this way use could be more evenly spread throughout the day. Perhaps the quality of learning in the library might then be enhanced.

The study documented *quantity* of use; it did not, however, examine quality of use. It did not, for example, determine whether the information needs of the learners are in fact being met or whether the experience in the public library is improving the information literacy of the learners. An earlier study of project work in a circuit of schools in Cape Town concluded that project work in itself does not guarantee information literacy (Hart, 2000). A tentative finding in Vista based on observation and staff interviews, which will be explored more deeply in the field study still to come, is that school learners get little support or guidance. Books deemed relevant for the current projects are placed on the project shelves and children help themselves to them. No education in the use of indexes, for example, was observed. Indeed there is no catalogue, database, or subject index available for public use. The only scaffolding provided is the Dewey signage on the shelves. In reply to a question on retrieval facilities, one of the librarians in charge made the comment, "We have to take them [pupils] to the shelves" (Interview 12 September). It is difficult to see how children can learn independent information retrieval skills if they are not provided with access to the library catalogue at least.

Another area in need of investigation is the capacity of the library staff for information literacy education. Their clear involvement in the educational programme surely calls for knowledge of information literacy theory and practice and for knowledge of the new curriculum and contemporary teaching approaches. As mentioned above, very few of the staff have tertiary level qualifications in either librarianship or education, a situation that might weaken the case for recognition of their role in formal education.

The study has hopefully provided empirical evidence valuable for the emotional debates being waged in public library circles over their taking on the work of school libraries. It provides useful information for educators in local schools and the Western Cape Education Department, who perhaps need more insight into the impact of Curriculum 2005 on libraries. Above all it might focus minds on the needs of school learners and on what needs to be done to meet them.

References

- Brooke-Norris, S B. (1986). The Johannesburg Reference Library and the crisis in black education. *South African Journal of Library and Information Science*, 54 (4), 200-202.
- Department of Education. (1998). A National policy framework for school library standards. Discussion document. Pretoria: Department of Education. Unpublished report.
- Department of Education. (1999). *South African school library survey 1999. National report*. Pretoria: Department of Education and Human Sciences Research Council.
- Department of Education. (2002). Revised national curriculum statement. June 2002. Retrieved from <http://education.pwv.gov.za/>
- Fourie, J A. (1995). Pupils as curricular information seekers and the role of the public library. *South African Journal of Library and Information Science*, 63(3), 129-138.
- Hart, G. (1999). Ready for the information society? A study of Cape Town's children's librarians. *New Review of Children's Literature & Librarianship*, 5, 169-188.
- Hart, G. (2000) *Project work as a vehicle for information literacy education in a circuit of South African schools*. International Federation of Library Associations. Retrieved from www.ifla.org.
- Hendrikz, F. 1998. Public libraries in South Africa 1998: an overview. Paper presented at the annual conference of the Library & Information Association of South Africa, November 1998, Bloemfontein. Unpublished paper.
- Issak, A. (Ed). (2000). *Public libraries in Africa: a report and annotated bibliography*. Oxford: International Network for the Availability of Scientific Publications.
- Karlsson, J. (Ed). (1996). *School learners and libraries: proceedings of conference on 28-29 November 1995 held at the Tropicana Hotel, Durban, KwaZulu-Natal, South Africa*. Dalbridge: Education Policy Unit, University of Natal.
- Le Roux, S. (2001). *School-community libraries: some guidelines for a possible model for South Africa*. Master's in Library and Information Science thesis, University of Pretoria, Pretoria.
- Leach, A. (1998). An overview of the public library sector in South Africa post 1994. *Innovation*, 16,3-19.
- LeCompte, M, Preissle, J with Tesch, R. (1993). *Ethnography and qualitative design in educational research (2nd ed.)*. San Diego: Academic Press.
- Library & Information Association of South Africa. School Libraries & Youth Services Interest Group. (2000). The need for school libraries in the South African curriculum: a response from LIASA to a South African Curriculum for the Twenty First Century Report of the Review Committee on Curriculum 2005. Unpublished paper,
- Naiker, S. & Mbokazi, S. (2002). *Developing libraries for South African learners and teachers: three case studies*. Durban: Education Policy Unit (Natal).
- National Committee for Library Co-Operation. (2000). *National guidelines for co-operation between community and school libraries*. Pretoria: UNESCO Pretoria Office.
- National Education Policy Investigation. (1992). *Library and information services: report of the NEPI Library and Information Services Research Group*. Cape Town: OUP/NECC.

- Niven, M. (1987). The problem of the provision of facilities and materials for school projects. *Artes Natales*, 5(10), 26-32.:
- Olën, S. (1996). School media centres in the curricula for initial teachers' training. *South African Journal of Library & Information Science*, 64(2), 92-100.
- Stopart, J DC. (1995). The status of school libraries in schools of the (ex) HOR. Cape Town: Western Cape Education Department. Unpublished paper.
- Sturges, P & Neill, R. (1998). *The quiet struggle: information and libraries for the people of Africa* (2nd ed.). London: Mansell.
- Todd, R. (2001). Transitions for preferred futures of school libraries: knowledge space, not information space, connections not collections, evidence, not advocacy. Keynote paper. Proceedings of the 30th Annual Conference of the International Association of School Librarianship, Auckland, New Zealand.
Retrieved from www.iasl-slo.org/virtualpaper2001
- Van der Walt, P J. (1981). Reference services to children and students in the public library. *Libri Natales*, 12 (3), 3-9.
- Witbooi, S. (2001). *The educational role of the public library: Kuils River as case study*. MBibl thesis, University of the Western Cape.

Biographical Note

Genevieve Hart is a senior lecturer in the Department of Library and Information Science at the University of the Western Cape and has taught there since 1995. She previously held a wide variety of positions, firstly as an English teacher then as a librarian. Her teaching and research interests focus on the status of school and children's libraries in South Africa, the information needs of youth and teachers, information literacy education at secondary and tertiary level, and South African youth literature. She was the Chairperson of LIASA's School Libraries & Youth Services Interest Group until the end of 2002 and is the Chairperson of the Programme Committee of IBBY Congress 2004. Email: ghart@uwc.ac.za

Adapting Education For School Librarianship: Addressing The Needs Of The Part Time Student.

**James Henri, Sandra Lee, Sue Trinidad,
Alvin Kwan, Ming Lai and Felix Siu**
University of Hong Kong.

Over the past few years repeated calls have been made by teacher librarian educators for evidence based practice by teacher librarians. This study is an attempt to provide evidence for the adoption of innovative practice in a post-service, part time Bachelor of Education program. Part time tertiary students undertaking studies in education at the University of Hong Kong are often heard to voice the opinion that the demands of university study are excessive. While it is generally accepted that the Hong Kong lifestyle is hectic, that teachers have a heavy schedule, and that travel to and from the university campus is time-consuming, little useful data exists to allow university professors to better understand the plight of the students or to provide evidence from which action could be taken to better tailor courses to the needs of students. Likewise many assumptions are made about tertiary student motivation but these assumptions are probably not grounded in any research findings. This exploratory study was undertaken to determine the factors affecting the full-time teacher's progress in their tertiary part-time study in school librarianship. The findings will better enable instructors to tailor teaching and learning to meet the needs of the part-time participant. Findings will also be informative for other part-time undergraduate programs.

Introduction

Education for school librarianship is typically offered to teachers in part-time programs and is therefore delivered after work hours when the students are suffering from fatigue. In many countries this education is primarily offered in a traditional face-to-face environment, which often means that students have to travel long distances to attend lessons. Other countries have chosen to follow a predominantly, distance education or online education pattern of delivery. This requires the adoption of technology and a learning environment that is often without the reassurance of face-to-face contact with instructors and peers.

The demand for programs necessary to revitalise and reform education in Hong Kong with particular emphasis on learning to learn and life long learning arose out of a series of education reports that highlighted the need for transformation in schooling (CDC, 2001; HKSAR, 2001). Significant funding has been provided to the school sector to enhance Information and Communication Technology (ICT) and information services, including the provision of computer labs, and libraries and the employment of IT coordinators and teacher librarians.

Responding to this demand the Hong Kong University commenced a three year part time BEd in Information Technology in Education (ITE) and Library Information Science (LIS) in 2000/2001. This program was initially a partnership between the School of Professional and Continuing Education (SPACE) and the Faculty of Education. The program was offered to teachers and teacher librarians wanting to up-grade their skills in the area of ICT and information management. The BEd (ITE/LIS) program prepares students in the various aspects of leadership and information management within schools. The program is delivered using an online course-room Interactive Learner Network (ILN) to supplement face-to-face classes and therefore attempts to provide the best of the online and face-to-face traditions.

Instructors in the program have regularly commented on a perceived significant variation in motivation among students. This is evidenced by such indicators as late attendance, evidence of lack of reading and out of class activity, and reluctance to participate in class group work or to initiate questions. This was surprising since the students are

required to pay significant fees to undertake the course. It also seemed counter-intuitive that teachers would show signs of lack of motivation when their study was optional. Were these teachers who were at the forefront of the education reform so steeped in the current culture that there was, at least subconscious, apathy to learning to change?

The instructors were very mindful of the reality that they did not have the data that could enable them to fully understand the impact that university study was having on student's lifestyle. To address this deficit, members of the program team sought funding to undertake a research project named, Innovative Pedagogical Practice Online (IPPO). IPPO commenced in 2003 and was undertaken to better understand and enhance the motivation and performance of part-time students studying in these programs. This research gathered qualitative and quantitative data from students undertaking the BEd program. Using an action research methodology, the instructors were able to tailor teaching and learning environments through technology to meet part-time student's needs and make more informed judgments with respect to workload, assessment modes, and delivery options. This has enhanced the instructor capability to better provide a sound metacognitive learning environment within which students are able to construct and build knowledge to become lifelong learners.

IPPO is an ongoing research project. This paper does not address parts of the project that involved the BEd (ITE) modules and presents only preliminary findings from the BEd (LIS) modules for the purpose of this paper. Further findings, especially those from the innovative practices that were used in the BEd (LIS) program, will be discussed in Durban at the conference.

Project Objectives

Some of the issues that IPPO was designed to address were:

- What are the characteristics of full time teachers enrolling in the part-time BEd programs?
- What adjustments do students make to their lifestyle on entering and progressing through the program?
- What are these students' perceptions towards using various modes of flexible delivery compared to a traditional face-to-face approach?
- How does the introduction of variations in content delivery and pedagogy impact on performance and motivation?

Survey of the Literature

Universities are currently grappling with a shift in paradigms where learning is being reconceptualised to embrace the potential of ICT as society makes the move from an industrial age to an information age. University students are expected to be more self-directed in their learning, think critically and solve problems in a rapidly changing world. With the advent of web-based learning students are being encouraged to take an active role in their own learning. Learner-centred education works on the premises that, in an information age, the learner is involved in his/her own research and learning, the outcome being they manage their own developments. Universities, in order to keep abreast with the information age, must develop courses and use delivery modes that reflect learner-centred education and life long learning for an increasing population of students who are mature students studying part-time (Amour, Cheng & Talpin, 1999; Kember, Lee & Li, 2001).

The BEd (LIS) program uses a combination of online and traditional approaches, making use of the in-house platform (ILN) developed for delivering materials and synchronous and asynchronous communication between students and instructors. Face-to-face lectures are enhanced with the integration of ICT. The current study intended to identify the learning styles of students enrolled in the BEd (LIS) program. Self-directed learners are better able to adjust to their learning environments by juggling busy work and study lives.

The study by Li et al (2000) of Hong Kong part-time students focused on self-management of learning and to a lesser extent, personal autonomy in learning. A major focus was how students coped with their courses. They found that the construct of self-direction was important. Li's study found that some students felt a degree of self-direction was necessary. Their study also recognized the culture of passive learning in Hong Kong and that this would require some

adjustments to help learners learn best. The study did find though, despite student's past learning experiences, they seemed to want autonomy in their study (Li et al, 2000, p. 25). Vogel et al (2002) found that Hong Kong students studying online needed to have self-motivation in the absence of more formal structure.

Another study by Sewell (2000) investigated mature-part-time students in higher education. The research examined characteristics of students and attempted to measure the application of skills in study and work. Students clearly understood the importance of applying what was learnt in their studies to real-world situations. Their responses indicated that self-direction and organization skills were important to both study and work. The research also strongly suggested providing more time for interaction between students -- an environment that already exists in the BEd (LIS) group where classes are smaller and study groups are formed without encouragement. BEd (LIS) students create networks for both social and study purposes. The literature shows that interaction between classmates becomes part of an important support network to cope with demands (Li et al., 2000, p.23). Students without families - and many in the BEd (LIS) program are not married - established cohesive relationships with classmates. They often work in the same small groups and as a class have established an informal collective for photocopying and communicating. A sense of belonging (Kember et al, 2001) and building a community of learners (Albon & Trinidad, 2002) are important characteristics of successful learning environments.

A self-directed learning environment is very different to that of the school system in which BEd (LIS) students grew up with in Hong Kong. It can be said that "Hong Kong students [and teachers] are often perceived as particularly exam-oriented in their study [and teaching] and that they prefer spoon-feeding to pass exam rather than learning for learning's sake" (TEHE, 2002). In the study by Li et al, (2000, p. 26) students demonstrated inefficient and time-consuming study habits. The reason for this might possibly lie in their experience as students in a system requiring memorization for exams. Yet, another study by Smith et al. (2000) found that students reported benefits from the flexible learning and the most significant outcome was improved time-management.

The literature indicates that self-directed learning requires opportunities for sharing amongst students but needs to be structured carefully and provide sufficient support to achieve outcomes (Li et al, 2000; Smith et al, 2000; Vogel et al, 2002). The BEd (LIS) program allows for ample opportunities to share in both the flexible and traditional environments. Smith et al. (2000) compared full-time students and part-time students in traditional, face-to-face learning environments performance and part-time students in a combination of these learning environments. The study measured performance and how personal characteristics contributed to life in and beyond university study. They found that in a flexible program students rated the learning support and materials better than those in traditional classrooms and proved to perform as well on assessment. The researchers also noted that flexible learning influenced the learning styles of students. Students experienced an improved ability to filter essential information. They were also more likely to use the Web for research purposes. Independent study was also improved. Students believed computer skills were also enhanced. However, they also reported information overload and frustration with learning the technology needed to participate in this flexible learning mode (Smith et al, 2000).

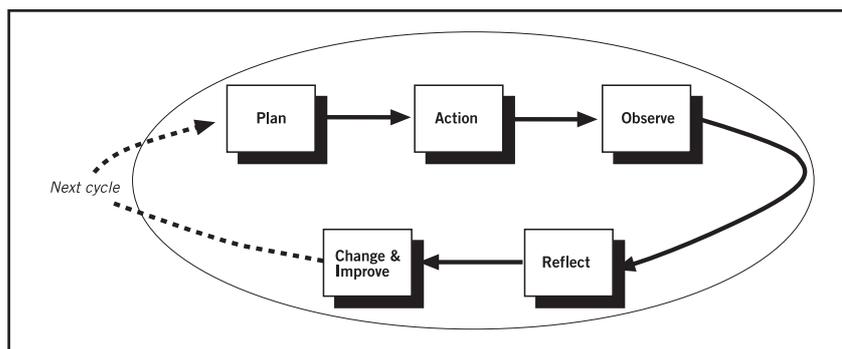
Students in the BEd (LIS) program are teachers with a fair amount of teaching experience as they are currently working, the program is essentially professional development. It is therefore worth noting studies in the literature that discuss distance or flexible professional development programs. Technology is a 'means of offering new forms of professional development' for teachers (Grant, 1996). Materials can be accessed for learning anytime and anywhere. The application of synchronous and asynchronous interaction allows for collaboration and peer teaching. Materials can link easily to research within library databases and on the Web. Grant's (1996) paper and case studies conclude that a combination of traditional and flexible learning provides the best model for professional development training. Students' gains through flexible learning include access to materials to guide best practice and immediate opportunities to return to schools to reflect and share with colleagues. University modules like that of the BEd (LIS) program are not the student's normal expected learning environments and hence skills of self-direction and autonomy need to be cultivated, as does a sense of community and belonging within a flexible learning environment. Continued studies of BEd (LIS) student's learning styles and expectations will provide more insight into the Hong Kong tertiary culture and how instructors might best use best practice to deal with this.

Methodology

This project employed both quantitative and qualitative methodology. The quantitative approach was used to enable benchmarking of existing student characteristics. Qualitative approaches were used to introduce variations to practice and to enable evaluation of the success of the innovations. **Four methods of data collection were used.**

1. An online questionnaire comprising closed and open questions was administered. This benchmarked learning style, motivation, work and lifestyle habits of the part-time students before undertaking further tertiary study and factors affecting studying such as time for travelling to and from lectures. In order to study whether students' learning styles and time usage was related to factors such as age, teaching position and teaching experience, a one-way Anova was applied to analyse the collected data. Reliability analysis based on Cronbach alpha was also adopted to study the consistency of measuring items. In both cases, SPSS 11.0 was employed to run the tests.
2. Interventions into practice, addressing the benchmarking, were conducted within an action research paradigm. Action research is a cycle of inquiry, whereby: 1) the present situation is analysed, 2) questions are raised, 3) factors are identified, 4) solutions are proposed, 5) interventions are developed and measured, 6) data are gathered and analysed, and 7) new questions are posed. Action research provides a systematic approach and encourages reflective decision-making (Farmer, 2000, p.1). The action research framework is most appropriate for researchers who recognize the existence of shortcomings in their educational activities and who would like to adopt some initial stance in regard to the problem, formulate a plan, carry out an intervention, evaluate the outcomes and develop further strategies in an iterative fashion (Hopkins, 1985). Action research is cyclical in nature and is intended to foster deeper understanding of a given situation, starting with conceptualising and particularising the problem and moving through several interventions and evaluations.

Figure 1: The Action Research eCycle



The pedagogical variations were introduced into selected core Modules in the BEd (LIS) part-time programs, offered to Year 1, Year 2 and Year 3 students. The modules were: *Concepts and Values in Education*, *Information Literacy*, *Introduction to Teacher Librarianship*, *Locating Information and Library Advisory Services*, and *Teacher Librarianship*.

Description of the innovative practices

Concepts and values in education

This is a core ten-week module for both BEd (LIS) and BEd (ITE) students. The innovative practices involved teaching the module within a computer lab, and providing a one week break from class for reflection, after five weeks. A resource pack containing all reference material was provided to the students and the length of assessment reduced to provide more time to focus on learning. A journal was used to track learning.

Information literacy

This module is a core module for both BEd (LIS) and BEd (ITE) students. The module was taught entirely online using a range of synchronous and asynchronous tools via ILN. The 'class' was comprised of both BEd (LIS) and BEd (ITE) students. Scaffolding was provided to students to enable them to adjust to the abolition of face-to-face time. Additional features were added to the ILN course room to enable small group work in Chat and to track conversations.

Introduction to Teacher Librarianship and Teacher Librarianship

These two modules incorporated a six-week out-of-class period within the curriculum. Therefore, after five weeks of 3-hour face-to-face sessions, and preceding the final two face-to-face sessions students were provided with a six week period of online and flexible learning in which they had to complete set tasks and record their learning on the ILN course room forum. The aim of this practice was to establish whether the out of class tasks affected the time spent on studying the module as compared to the traditional ten weeks of 3-hour sessions.

Locating information and library advisory services

Students were given a set of exercises and one hour at the end of sessions to complete the questions and independent learning tasks. The first was to be completed with the lecturer at the university. Attendance was mandatory. The remaining exercises could be completed during the last hour of the session or optionally on their own time sometime during the week. This was to use a flexible and independent approach to teaching reference skills using asynchronous peer/teacher feedback. The innovative practice also reduced time in lectures/sessions by one hour for at least six weeks to test the efficacy of flexible learning and if students preferred flexible learning.

3. Monitoring of motivation, participation, and performance was undertaken by the researchers who used this data as a basis of evaluation of the efficacy of the innovation. During the module the learning process was monitored and data collected to investigate the efficacy of flexible learning compared to conventional learning and other factors that influence pedagogical progress.
4. On completion of each module, interviews with representative focus groups explored the students' experience and whether their expectations were fulfilled. A series of questions were also used to further investigate student learning styles and profiles as a learner. This data were used to explore whether the innovative practices used in the modules had been effective. A focus group is a group of individuals selected and assembled by researchers to discuss and comment on a research topic from their personal experience (Powell et al., 1996) and benefit from interaction and group dynamics (Gibbs, 1997). Interaction enables respondents to ask questions of each other, as well as to re-evaluate and reconsider their own understandings of specific experiences (Kitzinger, 1995). Semi-structured interviews were conducted with a sufficiently open-ended framework to allow for focused, conversational, two-way communication. The flexibility of the interview schedule enabled re-ordering of content, encouraged digressions and expansions, revealed new topics, and identified any needed further investigation (Cohen et al., 2000). Focus groups, alongside semi-structured interviews, allowed the researcher to keep the session focused and at the same time they enabled focus groups to elicit information in a way which allows researchers to find out why an issue is prominent, as well as what is prominent about it (Morgan, 1988). As a result, multiple explanations of their behaviour and attitudes were more readily articulated when the respondents revealed their understandings and meanings (Lankshear, 1993).

Results

The results are discussed under four headings:

- What are the characteristics of students, who are mostly full-time teachers, enrolling in the part-time BEd (LIS) program?
- What adjustments do students make to their lifestyle on entering and progressing through the program?
- What are these students' perceptions towards using various modes of flexible delivery compared to a traditional face-to-face approach?
- How does the introduction of variations in content delivery and pedagogy impact on performance and motivation?

What are the characteristics of students, who are mostly full-time teachers, enrolling in the part-time BEd (LIS) program?

Respondents and their characteristics

From a total of 65 BEd (LIS) students, 53 students completed the questionnaire. The online questionnaire, delivered to students through ILN, aimed to investigate the impact that university study had on those part-time student's lifestyle and their adjustments in response.

Some profiling data about the 53 respondents such as their sex, age range and highest academic qualification achieved, *etc.*, are given in Table 1. For each of the respondents' characteristics, the descriptors with the highest, the next highest and the least frequency of occurrences are tabled.

Table 1. Profiling data about the respondents (n=53).

Most frequently selected choice (Frequency / Percent)	Next most frequently selected choice (Frequency / Percent)		Least frequently selected choice (Frequency / Percent)
Sex	Female (48 / 90.6%)	Male (5 / 9.4%)	N/A
Age	31-35 (14 / 26.4%)	26-30 (13 / 24.5%)	20-25 (1 / 1.9%) 56-60 (1 / 1.9%)
Teaching Position	Teacher (45 / 84.9%)	Panel head (3 / 5.7%)	Principal (1 / 1.9%)
Years of teaching experience	6-10 (22 / 41.5%)	11-20 (16 / 30.2%)	< 2 (1 / 1.9%)
Academic qualification	Cert./Dip. (22 / 41.5%)	High cert./Dip. (18 / 34.0%)	Postgraduate cert./Dip. (6 / 11.3%)
No. of people to live with	Two (12 / 22.6%) Three (12 / 22.6%)	One (11 / 20.8%)	Zero (5 / 9.4%)
No. of children	Zero (24 / 45.3%)	Two (12 / 22.6%)	Three (1 / 1.9%)
No. of children below 15 (for those have children only)	Zero (10 / 18.9%)	Two (8 / 15.1%)	Three (1 / 1.9%)
School type (level)	Primary (306 / 56.6%)	Secondary (30 / 37.7%)	Others (1 / 1.9%)
School type (duration)	Whole-day (36 / 67.9%)	Half-day (15 / 28.3%)	N/A

Some additional remarks on the profiling data of the respondents are as follows:

- More than 35% of the female respondents were working mothers and 80% of the male respondents were working fathers.
- None of the respondents held a postgraduate degree.

What adjustments do students make to their lifestyle on entering and progressing through the program?

The core adjustments that students make to their lifestyle can be reflected by their time usage in studying, travelling for classes, and leisure.

Time spent preparing for class per week

Usually the students are required to take two modules per week in term time. Typically each module, entails a 3-hour class meeting every week. Table 2 shows that more than 60% of the students spared no more than 4 hours a week to prepare for their classes. Only 13% of the students spent more than 9 hours a week in non-class learning activities. The data appears to suggest that most students do not spend much time in their study on top of face-to-face class meetings.

Table 2. Time spent preparing for class per week (n=53)

Time spent (in hours)	Frequency	Percent	Cumulative percent
None	0	0%	0%
< 2	13	24.5%	24.5%
2 - 4	19	35.8%	60.4%
5 - 8	11	20.8%	81.1%
9 - 12	3	5.7%	86.8%
13 -16	3	5.7%	92.5%
> 16	4	7.5%	100.0%

Time spent travelling to and from classes

Although Hong Kong is small and transportation within the city is convenient, the time spent in travelling for face-to-face classes should not be underestimated because schools may be located in remote areas. Furthermore, the BEd students may reside in remote areas too as this can lower their accommodation costs. As the university campus is located at the edge of the downtown area of central Hong Kong, getting to the campus may be quite time-consuming for some students. The survey results revealed that 79.3% of the students took about 46-90 minutes to travel to the university and about the same range of time to get back home after class. Compared to the time that students spent preparing for class per week, the travelling time appears to be rather significant.

Time spent in school per week

Typically teachers in Hong Kong have heavy teaching and marking loads and need to work for long hours in schools. This can be reflected in Table 3 which shows that three quarters of the respondents needed to work at least 46 hours in school a week. Since many teachers also need to work on school business at home, this may partly accounted for their low participation in non-class activities.

Table 3. Time spent in school per week (n=53)

Time spent (in hours)	Frequency	Percent	Valid Percent	Cumulative percent
< 35	1	1.9%	1.9%	1.9%
35 - 40	3	5.7%	5.8%	7.7%
41 - 45	9	17.0%	17.3%	25.0%
46 - 50	23	43.4%	44.2%	69.2%
51 - 55	11	20.8%	21.2%	90.4%
> 55	5	9.4%	9.6%	100.0%
Not replied	1	1.9		

Time spent for leisure per week

As the respondents need to spend a lot of work at work, they should not be able to spare much time for leisure. This is confirmed with the data shown in Table 4 as more than half of the respondents spent less than four hours a week for leisure.

Table 4. Time spent for leisure per week (n=53)

Time spent (in hours)	Frequency	Percent	Valid Percent	Cumulative percent
None	6	11.3%	11.5%	11.5%
< 2	8	15.1%	15.4%	26.9%
2 - 4	13	24.5%	25.0%	51.9%
5 - 8	14	26.4%	26.9%	78.8%
9 - 12	7	13.2%	13.5%	92.3%
13 - 16	3	5.7%	5.8%	98.1%
> 16	1	1.9%	1.9%	100.0%
Not replied	1	1.9%		

What are these students perceptions towards using various modes of flexible delivery compared to a traditional face-to-face approach?

Initial investigations of the qualitative data from the feedback for *Information Literacy*, the module delivered entirely online, revealed some enthusiasm for that mode of delivery due to modelling of real-world practice and foreseen benefits of saving time in travelling as illustrated by these comments from a student:.

It is my first [time] to have lecture through Internet. It is so surprising! What is this module about? Is it about searching engines or searching skills? It is useful for us.

The same student responded to another ILN Forum posting:

I think it's a new way of learning in this information explosion age. It's so funny and save a lot of travelling time.

Although not all students were convinced that learning online is better as illustrated by this discussion that took place about the challenges of learning online. Two students voiced their preference for traditional lessons. A student responded to point out the benefits of online learning.

...for some of participants like learn in a campus, another like through internet. However, I have same feeling. especially "this module" I think we need more interaction and share (ideas) immediately.

Some students experienced difficulties in using home computers. The Chat function on ILN requires a Java plug-in. It takes time to download. A Web search exercise also required students to launch a second browser window if they wanted to work on the lesson and chat at the same time which demanded more than some student's computing resources could handle.

The students' responses raised some further issues to consider. Firstly, did the students have difficulties in accessing the Internet to facilitate online learning? Secondly, did they have enough knowledge to use IT to support learning online? Thirdly, did they have the practice of using online tools to aid learning? A number of questions were included in the questionnaire in order to help us develop a better understanding of what potential difficulties may be encountered in promoting online learning among the students.

Internet Access at Home

More than 94% of the respondents had Internet access at home (see Table 5). Regarding the degree of access to the computers, 35.8% had sole access, 28.3% needed to share the access with another family member whereas 20.8% needed to share the access with two other persons (see Table 6). From the tables, it seems that the students did not have an access problem to the ILN online course-room via the Internet, which is indispensable for online learning.

Table 5. Access of Internet at home (n=53)

Internet access at home	Frequency	Percent
Yes	50	94.3%
No	3	5.7%

Table 6. Share of access of computers (n=53)

Number to share with	Frequency	Percent	Valid Percent	Cumulative percent
0	19	35.8%	38.0%	38.0%
1	15	28.3%	30.0%	68.0%
2	11	20.8%	22.0%	90.0%
3 or more	5	9.4%	10.0%	100.0%
Not replied	3	5.7%		

Type of Internet Access

Slow Internet access can be a hindrance to online learning. In this regard, students were asked about the type of Internet access they had at home. The results, as shown in Table 7, indicate that most students had a broadband Internet connection installed at home. Thus for most students, there was no bandwidth problem when accessing the Internet.

Table 7. Type of Internet access (n=53).

Internet access at home	Frequency	Percent
Broadband	43	81.1%
Dial-up	6	11.3%
Not replied	4	7.5%

Level of IT Competence

It is reasonable to believe that people with a higher level of IT competence are more likely to accept the idea of online learning. In Hong Kong, the Education and Manpower Bureau has introduced a classification of technical IT skills for schoolteachers. As indicated in Table 8, more than 90% of the respondents had achieved an intermediate IT level (IIT). To achieve IIT, teachers need to be able to use some search engines for information search, download and upload files from FTP sites, and participate discussions in newsgroups, etc.

Table 8. Level of computer competence (n=53).

IT Level	Frequency	Percent	Cumulative Percent
Advanced IT	1	1.9%	1.9%
Upper-intermediate IT	9	17.0%	18.9%
Intermediate IT	38	71.7%	90.6%
Beginning IT	3	5.7%	96.2%
None	2	3.8%	100.0%

The survey results suggest that the students are sufficiently equipped in terms of facilities and the skill set to allow them to use the Internet and online learning effectively. The remaining question is whether they really practice what they learn. In this regard, the students were asked in the survey a series of questions about how often they used e-resources.

Locating Relevant Resources Electronically

Tables 9-13 shows how often the respondents use different electronic resources to help them study. According to Table 9, about 84.6% of the respondents always or most of the time use the Web to locate information. The corresponding percentages sharply decrease to 36.5%, 26.9%, 21.2% and 31.4% for Internet communication tools, the university library system, mega databases and AskEric respectively (see Tables 10-13). This finding is interesting as the students used the Web and Internet communication tools more often than the university library system, mega databases and AskEric which are traditional tools for locating learning resources.

Table 9. Locating information and resources from Web (n=53).

Usage	Frequency	Percent	Valid Percent	Cumulative Percent
Not at all	0	0	0	0
Once in a while	1	1.9%	1.9%	1.9%
Some of the time	7	13.2%	13.5%	15.4%
Most of the time	29	54.7%	55.8%	71.2%
Always	15	28.3%	28.8%	100.0%
Not replied	3	5.7%		

Table 10. Locating information and resources from Internet communication tools (e.g., e-mail, chatrooms, bulletin boards, newgroups, etc.) (n=53).

Usage	Frequency	Percent	Valid Percent	Cumulative Percent
Not at all	4	7.5%	7.7%	7.7%
Once in a while	12	22.6%	23.1%	30.8%
Some of the time	17	32.1%	32.7%	63.5%
Most of the time	16	30.2%	30.8%	94.2%
Always	3	5.7%	5.8%	100.0%
Not replied	1	1.9%		

Table 11. Locating information and resources from the university library system (n=53)

Usage	Frequency	Percent	Valid Percent	Cumulative Percent
Not at all	1	1.9%	1.9%	1.9%
Once in a while	16	30.2%	30.8%	32.7%
Some of the time	21	39.6%	40.4%	73.1%
Most of the time	11	20.8%	21.2%	94.2%
Always	3	5.7%	5.8%	100.0%
Not replied	1	1.9%		

Table 12. Locating information and resources from mega databases (e.g., Emerald & ProQuest) (n=53).

Usage	Frequency	Percent	Valid Percent	Cumulative Percent
Not al all	8	15.1%	15.4%	15.4%
Once in a while	10	18.9%	19.2%	34.6%
Some of the time	23	43.4%	44.2%	78.8%
Most of the time	9	17.0%	17.3%	96.2%
Always	2	3.8%	3.8%	100.0%
Not replied	1	1.9%		

Table 13. Locating information and resources from AskEric (n=53).

Usage	Frequency	Percent	Valid Percent	Cumulative Percent
Not at all	6	11.3%	11.8%	11.8%
Once in a while	10	18.9%	19.6%	31.4%
Some of the time	19	35.8%	37.3%	68.6%
Most of the time	15	28.3%	29.4%	98.0%
Always	1	1.9%	2.0%	100.0%
Not replied	2	3.8%		

Apparently, the results suggest that the BEd (LIS) students might not have taken full advantage of the diversity of e-resources that are available for their access because about one third of them used Internet communication tools, the university library system, mega databases and AskEric only once in a while or even not at all. However, it remains to be investigated in subsequent focus group interviews why some students relied on the Web much more heavily than others.

How does the introduction of variations in content delivery and pedagogy impact on performance and motivation?

At the time of writing this paper a detailed response cannot be given because the post module interviews have not been completed. These findings will be reported in Durban. However, some interesting issues have been identified in the *Information Literacy* module.

Flexible online learning, beyond the innovative practice intended for this study, was also explored during the period of this study. As a result of the atypical pneumonia (or SARS) outbreak in Hong Kong, the University suspended classes

for public health reasons. The BEd students in this study were able to continue lessons using ILN. The Information Literacy module was set up entirely online thus avoided rescheduling make-up sessions in uncertain circumstances. Not all students were as equipped or prepared to work in this learning environment. While some students enjoyed the flexibility, some raised concerns about their access to hardware/software, isolation from lecturers and other classmates. Some students also felt they were not getting the same value for tuition without having in-person lectures as voiced by one disgruntled student:

You have said that we are learning an IT [course]. I really feel not comfort of using such forum... we have paid for the lesson. The main reason that most of us choose study in HKU rather [than other distance learning] courses is we enjoy...face-to-face lessons rather than online courses.

It became clear that despite the IT focus of the program and experience within their schools, students may have difficulty in very basic troubleshooting. It must be noted that these students are 1st and 2nd years in the BEd program and have not used online learning before. Lacking experience in online learning, they asked how attendance would be taken and expected to login to the course room at the regular class time and find something resembling a talking head. Some students raised questions about the lesson and task without reading or completing it.

The last lesson I haven't attend because when I login to the ILN at 6:30pm. I can't find any lecturers and tutors online. Therefore, I [quit] the ILN. I attended for the 1st online lesson, I can't find that [lecturers] are there, and really hard to follow the forum. Besides, not all our classmates have their pc at home. How do they do the online learning?

This initial qualitative data points to the conclusion that a combination of flexible online and traditional approaches would most likely meet the needs of the current students. This is supported by current literature in the area of part-time students and online learning in Hong Kong (Li et al, 2000; Smith et al, 2000; Vogel et. al, 2002). Scaffolding and training on learning platform features should be included in induction and repeated in regular lessons. Some students voiced a strong need for face-to-face lectures and said they enjoyed the social outing of university lectures and seeing their friends in class. Current research into cultural factors contributing to student concerns reveals the reasons why, despite long commutes and busy lives, students want classroom interaction where they feel a sense of belonging and community (Albon & Trinidad, 2002; Vogel, 2001). The new environment also presented some problems students found difficult to resolve. Homes in Hong Kong can be small and crowded with children and in-laws, yet students did not think to overcome these disruptions by using other facilities such as the University library or labs as evidenced by this student's comment:

We are psychologically and electronically not prepared. We enjoy face-to-face tutorials and lectures in the HKU campus. We meet our classmates on the way to HKU and have meals together before or after the lessons. It is a real personal touch. We can discuss about the assignments, our students (remember we are teachers too), our families...we paid for NOT having a lesson online with our family members fooling around!

Conclusion

The busy working life of the average Hong Kong professional is almost a cliché. After long and tiring workdays, students are entering our classrooms - both real and virtual - with the responsibilities of home and work hanging over their heads. Flexible learning, more adaptable to an adult's world, can hopefully accommodate demands for those enrolled in continuing education while working. The results from the current study provide information about the potential of flexible learning in relieving some pressure for part-time students in Hong Kong.

A significant issue for the researchers has been the difficulties associated with undertaking the research when many of the respondents do not feel particularly comfortable using English, which is a second or third language. Particular care has been taken in the construction of the questionnaire and it was pleasing to find overall a very high reliability. While all questions for the interviews were scripted in English they were administered in Cantonese. This entailed very labour intensive transcription and translation. English did not always translate well into Cantonese.

For example for the interview question “What are the biggest challenges for you in part-time tertiary study?” the word “challenge” while seen in a positive context in western society was translated to the word “problem” in Cantonese and the question used was “What are the biggest problems for you in part-time tertiary study?” Despite such difficulties, valuable data has been gathered to better enable the instructors to tailor teaching and learning to meet the needs of the part-time students studying at Hong Kong University. The IPPO project was undertaken to better understand the motivation and performance of part-time students completing a BEd in Library and Information Studies (LIS) in Hong Kong. This ongoing study has already been invaluable in providing base line data about the student cohort, their lifestyle, learning styles, adjustments and perceptions. It has provided a clear picture about the pressures of life faced by these teachers. Whether the pedagogical innovations are successful in meeting the needs of the students is at this stage uncertain. Certainly the early indications are that some students may be happier with flexible delivery that is a combination of both face-to-face and online learning not just entirely online due to the need for a sense of belonging and community. Further insights will be reported in Durban.

References

- Albon, R. & Trinidad, S. (2002, June). Building learning communities through technology. In K. Appleton, C. Macpherson, & D. Orr (Eds.), *International Lifelong Learning Conference: Refereed papers from the 2nd International Lifelong Learning Conference*, (pp. 50-56). Proceedings of the conference held at Yeppoon, Central Queensland, Australia.
- Armour, R. T., Cheng W. N. & Talpin, M. (1999). Some characteristics of the student experience in Hong Kong. In R. T. Armour, W. N. Cheng & M. Talpin (Eds.) *Evaluation of the Student Experience Project: Vol. 4. Understanding the Student Experience in Hong Kong Part 1: The Adaptation and Administration of a Questionnaire* (pp. 43-60). Hong Kong: City University of Hong Kong, Centre for the Enhancement of Learning and Teaching.
- CDC, Curriculum Development Council. (2001). The Learning to Learn: The Way Forward in Curriculum Development ~ Web Edition. Hong Kong. Retrieved March 30, 2003 from <http://cd.ed.gov.hk/report/sept/eindex.htm>
- Cohen, L., Manion, L. & Morrison, K. (2000). *Research methods in education* (5th Ed.). London: Routledge/Falmer.
- Farmer, L. (2001). Information literacy: A whole school reform approach. Paper presented at the 67th IFLA Council and General Conference, Boston, August 16-25. Retrieved March 30, 2003 from <http://www.ifla.org/IV/ifla67/papers/019-106e.pdf>
- Gibbs, A. (1997). Focus groups. In Gilbert, N. (Ed.) .). *Social research update*. Guildford, England: University of Surrey,
- Grant, C M. (1996). Professional development in a technological age: New definitions, old challenges, new resources. *In Model Schools Partnership Research Monograph*. Retrieved March 15, 2003 from http://ra.terc.edu/publications/TERC_pubs/tech-infusion/prof_dev/prof_dev_frame.html
- HKSAR, Hong Kong Special Administrative Region. (2001). *Digital 21 Hong Kong: Building a digitally inclusive society. Hong Kong Government Report, September.* Hong Kong: Information Technology Services Department Hong Kong Special Administrative Region Government.
- Hopkins, D. (1985). *A teacher's guide to classroom research*. Philadelphia: Open University Press.
- Jarvis, P. (2000, June). Imprisoned in the global classroom-revisited: towards an ethical analysis of lifelong learning. Keynote paper presented at the lifelong learning. In K. Appleton, C. Macpherson, & D. Orr (Eds.), *International Lifelong Learning Conference: Refereed papers from the 1st International Lifelong Learning Conference*, (pp. 20-27). Proceedings of the conference held at Yeppoon, Central Queensland, Australia.

Kember, D., Lee, K., & Li, N. (2001). Cultivating a sense of belonging in part-time students. *International Journal of Lifelong Education*, 20(4), 326-341.

Kitzinger, J. (1995). Introducing focus groups. *British Medical Journal*, 3(11), 299-302.

Lankshear A.J. (1993). The use of focus groups in a study of attitudes to student nurse assessment. *Journal of Advanced Nursing*, 18, 1986-89.

Li, N., Lee, K., & Kember, D. (2000). Towards self-direction in study methods: The ways in which new students learn to study part-time. *Distance Education*, 21(1), 6-28.

Morgan, D.L. (1988). *Focus groups as qualitative research*. London: Sage.

Powell, R.A., Single H.M., Lloyd K.R. (1996). Focus groups in mental health research: enhancing the validity of user and provider questionnaires. *International Journal of Social Psychology*, 42(3), 193-206.

Sewell, P. M. (2000). Mature students in part-time higher education—perceptions of skills. *Innovations in Education and Training International*, 37(4), 304-12.

Smith, I. Choi, S. H. & Cairncross, S. (2000, September) Does on-line flexible learning fulfil students' needs and expectations? Paper presented at ALT-C 2000 Programme. IMIST, Manchester, England.

Teaching Effectively in Higher Education in Hong Kong (TEHE) web site (2002). Functions & Effect of Assessment on Student Learning. Retrieved January 10, 2003 from <http://teaching.polyu.edu.hk/>

Vogel, D., Shroff, R., Lee, F., Kwok, S. & Combes, J. (2002, September). Student e-learning intrinsic motivation: A qualitative analysis. Paper presented at PACIS2002 The Next e-What? for Business and Communities, Tokyo, Japan.

Biographical Notes

James Henri, Sandra Lee, Sue Trinidad, Alvin Kwan, and Felix Siu are academics in the Division of Information & Technology Studies; Lai Ming is a Research Assistant in the Centre for IT in Education; Faculty of Education, University of Hong Kong, Hong Kong. Email: ippo@cite.hku.hk

This research was funded by a grant from the School of Professional & Continuing Education (SPACE), University of Hong Kong.

Albert Chieng

From 1985-1994 Albert Chieng was employed as a Master teacher of Chinese in Darwin and Adelaide (Australia). In 1995 he was appointed as lecturer in language teaching methods and CALL at the University of New England (UNE) in Armidale (Australia). In 2000 he was appointed as the Founding Director and Senior Lecturer of the UNE campus in Wuxi China. The campus offered intensive English courses, and undergraduate programs. In late 2002 he was appointed as a lecturer in the Centre for Information Technology in Education (CITE) within the Faculty of Education, at the University of Hong Kong.

Recent publications are:

- Chieng, A. (2001). *A Handbook for Modern Languages Teachers*. Armidale, NSW: UNE Press.
- Chieng, A. (2001). *Technology-enhanced Language Teaching for Modern Language Teachers*. Armidale, NSW: UNE Press.

He is a life member of the International Society of Chinese language Teaching (Beijing), member of Australian Council of Education, a member of the Applied Linguistic Association of Australia, and a member of the Association for the Advancement of Computing in Education (AACE, USA).

Alvin Kwan

Dr. Kwan received his MSc and PhD degrees in Computer Science from University of Essex (U.K.) in 1989 and 1997 respectively. He started his teaching career in 1990. Currently he works as a lecturer and teaches subjects concerning the use of IT in education at University of Hong Kong. His research interests concern the application of artificial intelligence techniques in education and school administration. Dr. Kwan has published in refereed journals and international conferences, mainly in the areas of artificial intelligence and its applications in timetabling. In late 2001, he was invited to provide consultancy services to National Computer Systems Pty. Ltd. (NCS), a wholly owned subsidiary of Singapore Telecom, for the development of the school timetabling module for the WebSAMS project launched by Education and Manpower Bureau of Hong Kong SAR Government. WebSAMS is an integrated web-based school administrative system that will be installed to virtually all government funded primary and secondary schools by the end of 2004.

Felix Siu

From 1989-1999 Felix Siu was employed by La Trobe University (Australia) and assisted with the management of the Information Services in the Faculty of Health Sciences and implemented strategies to promote the efficient and appropriate use of Information Technology. In 2000 he took up the position of Lecturer in the Division of Information Technology and Studies, Faculty of Education, at the University of Hong Kong. Felix Siu has extensively experience in running workshops for students and teaching staff in the use of Information Technology. He has been the chief software engineer and designer in a number of awards winning educational multimedia courseware e.g. A Sound Judgement Program, Protecting the Health Professionals, and Fluid Exchange. His recent research involves the creation of a multimedia program for the intervention of developmental phonological processes. He is currently Secretary of Hong Kong Association for Educational Communications and Technology <http://www.hkaect.org> and a Committee Member of the Centre for Information Technology in Education <http://www.cite.hku.hk> within the Faculty of Education, at the University of Hong Kong.

James Henri

From 1981-2001 James Henri was employed by Charles Sturt University (Australia) and coordinated their programs in teacher librarianship and information literacy. In 2001 he took up the position of Deputy Director of the Centre for Information Technology in Education within the Faculty of Education, at the University of Hong Kong. James Henri has written extensively on issues that relate to teacher librarianship. He is known internationally for his seminal work on the information literate school community, including an extensive research agenda with colleagues Lyn Hay (CSU) and Dianne Oberg (University of Alberta). Recent monographs are:

- Henri, J., Hay, L., & Oberg, D. (2002). *The school library-principal relationship: Guidelines for research and practice*. (IFLA Professional Reports, No 78.) The Hague: IFLA.
- McGregor, J., Dillon, K., & Henri, J. (Eds.), (2003). *Collection management for school librarians*. Lanham, Maryland: Scarecrow Press.

He is currently Vice President of The International Association of school Librarianship <http://www.iasl-slo.org/officers.html> and a Standing Committee Member: International Federation of Library Associations (IFLA), Section of School Libraries and Resource Centers <http://ifla.org/VII/s11/ssl.htm>.

Ming Lai

Ming Lai is a Research Assistant in the Centre for Information Technology in School and Teacher Education. He has a Bachelor of Social Sciences from the University of Hong Kong, and a Master of Philosophy in Psychology from the Chinese University of Hong Kong. Ming Lai has supported a number of projects in the field of education and psychology and is proficient in the use of quantitative and qualitative tools.

Sandra Lee

Sandra Lee was employed in Canada as a youth services librarian and information specialist. In 2000 she relocated to Hong Kong and taught library and information studies in a paraprofessional program. She currently teaches in the Faculty of Education at the University of Hong Kong. Sandra Lee's research interests include teacher librarianship, knowledge management and information retrieval. She is currently Director, East Asia, The International Association of School Librarianship <http://www.iasl-slo.org/officers.html>

Sue Trinidad

Sue Trinidad currently teaches technology education modules within CITE to post-service teachers completing the BEd [ITE] and MSc [ITE] programs in Hong Kong with the Faculty of Education. Previously Sue was with the Faculty of Education, Curtin University of Technology, Western Australia from 1986-2002. Sue began her teaching career in outback Western Australia as a primary school teacher with the Western Australian Education Department then moved into university teaching in 1986 training pre-service and post-service teachers in technology education. Sue has been involved in many projects in Australia and presents regularly at technology conferences. To date Sue has presented nine keynote addresses and 64 conference papers: <http://www.cite.hku.hk/people/strinidad/>

Sue is a member of the editorial panel and editorial board of *Australian Educational Computing*, the *Journal of the Australian Council for Computers in Education* (ACCE) (1996-present) and editorial board member for the *Australian Journal for Educational Technology* (AJET) (2000-present) *International Electronic Journal for Leadership and Learning* (IEJLL) (2001-present). She has commented regularly in the media on current technology directions and issue, and was co-editor of various issues of LOGIN for the Educational Computing Association of Western Australia (ECAWA) journal for teachers (1990-1996). She has been awarded a life membership for her service to the Western Australian computing community.

Presentation and Analysis of Supervised Personal Work in France (T.P.E. / Travaux Personnels Encadrés): From Technicist Barriers (or “walling up”) to an Opening up to Pedagogy and Education for Information

Vincent Liquete

IUFM Aquitaine

France

Translation assistant Nathalie Peynaud

Since 1999, the French Educational System has spread some units based upon the encounter between some teaching disciplines and the school documentation centre with an emphasis on the pupils' interests, research and information re-writing methods and multi-disciplinary approaches. A set of “pedagogical barriers” seem to become open to change (a fragmented relationship of disciplines and knowledge, new constructions and assessments of the pupils' work); however some new forms of barriers appear (such as technicist barriers, discrimination in access to information, new misunderstandings among pupils, etc)

Depuis 1999, le système éducatif français a généralisé des dispositifs reposant sur la rencontre entre des disciplines d'enseignement et la documentation scolaire, mettant l'accent sur les centres d'intérêt des élèves, les méthodes de recherche et de réécriture documentaires et les démarches pluri-disciplinaires. Un ensemble de «barrières pédagogiques» semblent devenir «perméables» au changement (le rapport segmenté des disciplines aux savoirs, de nouvelles constructions et évaluations du travail de l'élève, ...), tandis que de nouvelles formes d'enfermement se dessinent (enfermement techniciste, discriminations dans les accès à l'information, nouvelles incompréhensions de l'élève,...).

Research Problem And Hypothetical/Deductive Elements

In France, until the end of the 90's, the activities in the school's Documentation and Information Centre (C.D.I.) essentially resulted from the initiative of the documentalist (teacher librarian) and/or from the wish of the individual teacher to collaborate in a partnership process. The new school year in 1999 brought the implementation of a new unit called “Supervised Personal Work” (T.P.E.). It was meant for lower sixth form students (then for final year students) and focused on research, selection of information, a collective re-writing of the information before communicating it as various documentation products followed by a viva in front of a jury composed of teachers from their school. At first, the unit was not accepted by many teachers, especially because, on an institutional level, it was viewed as a command or injunction from the National Education Ministry, and also because pedagogically, it required re-thinking and re-organising traditional teaching methods.

By surveying such a unit for three school years, we plan to try to understand the effects of the T.P.E. on the following:

- the mission of the school's Documentation & Information Centre (CDI)
- the relationships between the teacher-documentalist (teacher librarian) and the subject teachers
- the way the pupils perceive the institutional expectation as far as building and gaining skills are concerned.

We wondered whether, contrary to the aims of the innovation, new barriers had not been erected between the teachers and the documentalists and between the school and the private sphere. If indeed new barriers were discovered, we wished to examine the role of the T.P.E. in such processes.

We assumed that implementing an innovative, multi-disciplinary documentary unit with an injunction aspect would reveal a certain number of obstacles and limitations in the traditional pedagogy, but that the various parties implied in the T.P.E. (teachers, pupils and documentalists) would have both elaborated a set of strategies, which may be complex, in order to circumvent them, and initiated some actions which the school institution would never have considered formerly.

Research Methodology Mobilized For A Longitudinal Approach

The findings we are going to present were obtained by analysing data collected thanks to four methods combined and interconnected.

First: we conducted a rigorous survey of the information offered on the web, provided to promote the implementation of the T.P.E., essentially since September 2000, by various institutional sites (such as Libraries, the National Centre for Pedagogical Documentation, the University Institutes for Teachers' Training, The National Education Ministry, The Education Portal, the Rectorate websites, etc...). The technical units surveyed came as websites, circulation lists and educational portals.¹

Second: we created then issued a questionnaire for all the documentalist teachers (teacher librarians) in the Aquitaine region high schools (that is 50 documentalist teachers). The questionnaire focused on: the access systems to information, the implementation of the T.P.E., the pedagogical aspects of the T.P.E., and the pupils' personal working methods with regard to their handling of information sources (documentation).

At a third stage, we continued with a longitudinal lengthwise analysis thanks to semi-directive interviews conducted with 20 teachers, about one year after implementing the T.P.E. The interviews tried to find out if the views, the representations and the practices revealed, while analysing the questionnaires, were confirmed. Such an approach enabled us to see some changes in the analysis when confronted with the professional and pedagogical practice of the T.P.E. ("representation confronted to pragmatism").

As a conclusion, we undertook a few immersions in school sites by means of an ethno-methodological approach during the pupils' working sequences in T.P.E., as well as during the oral viva for a final assessment of their work. This phase provided the most valuable and most significant findings.

Presentation Of The Missions Of The Documentalist - Teacher In The French Educational System

The Centres of Documentation and Information (C.D.I.) are managed by some documentalist-teachers who have to carry out four main missions as pointed out in circular n° 86-123 dated March 13th 1986. The first essential point which has to be insisted on, is that the documentalist-teacher's status is that of a teacher. He holds a Certificate of Capacity for teaching in Secondary Schools (C.A.P.E.S.) in Documentation since 1991, as it is requested for any other teaching discipline. He is essentially:

¥ *Responsible for initiating and training the pupils into documentary research*

This mainly consists in initiating the pupils into the methods of information research (R.I.) , helping them retrieve the documentary holdings in the C.D.I. and organising, selecting and understanding the information contained in the documents.

¥ *Responsible for the action linked with the pedagogical activity in the school*

His action is in keeping with the methodological projects of the teaching team, especially by finding a support on the various cross themes and the various discipline programmes. He is an active intermediary between the pedagogical projects, the teachers' will to collaborate and the information resources he handles in the school.

¥ **Participation in the opening up of the school**

The documentalist-teacher is the main party in the school's communication policy in order to "advertise" the school outside the school. He has to promote the relationships with a variety of partners such as the local press, other schools, cultural and technological bodies, etc...

¥ **Responsible for the centre of multimedia documentary resources**

Finally, he has to see to the proper functioning of the C.D.I. especially for the documentary resources he keeps at the users' disposal. The documents handled are varied, such as books, magazines, photographs, snapshots, films and soundtracks.² Moreover, he is answerable for the maintenance of the equipment he is responsible for and acts as advisor in relation to his technical expertise (in a broad sense) to everyone in the school.

Presentation Of The T.P.E. Unit . Supervised Personal Work :

We are going to deal with the major unit in high schools³, which was implemented at the beginning of the new school year in 2000, that is the T.P.E. "Supervised Personal Work". For the first time, we seem to be facing a more ambitious organisation which foreshadows the massive entry of the Internet in teaching (Pantanella, 2000), at least in the R.I. phase; even in the elaboration of the final production.⁴

Such a unit is based upon eight major principles:

1: The audience it is meant for:

The T.P.E. are not meant for pupils below the fifth form, but for those who are in lower sixth forms (for whom T.P.E. are compulsory) and for final year students, for whom they are optional. That year called "final year" (as being the last one in Secondary schools) ends with a final exam about all the subjects taught: this exam is the "baccalauréat" (a secondary school exam which is necessary for entry to university).⁵ The mark obtained in T.P.E. is taken into account only when it is superior to an average (10/20). The T.P.E. constitutes a "mark bonus".

2: The multi-disciplinary aspect:

The T.P.E. units are based upon a real multi-disciplinary organisation (Blanchard-Laville, 2001). The project has to cross two teaching disciplines at least, which theoretically have nothing in common.⁶ In addition to the traditional disciplines, we can add the discipline of "documentation" or information handling, which brings some methodological challenges, information accessing, some access to virtual information together with the documentary holdings of the C.D.I.

3: The specific role of the school documentation centre:

Documentation is implied in any stage of the pupils' T.P.E. project: its preparation, its elaboration, analysing the set of problems concerning the subject, building up a corpus of documentary units, R.I., selecting information, re-writing a personal document, issuing the results to the others, and at last, elaborating a documentary product which had been clearly defined since the very beginning. For the first time in an innovative context, documentation is being both integrated into every stage of the project and articulated with discipline objectives. That is essentially the reason why it is a unique information research object in our teaching system up to date.

4: The physical space:

In the school, the most essential places are both the C.D.I. and the computer rooms which offer access to the networks, followed by the teaching classrooms. However, one major statement with regard to theory and practice is that the notion of "space", as far as pedagogy is concerned, changes basically because a variety of information sources in the environment such as local libraries as well as those of museums or associations and cultural centres, are commonly used by the pupils. Such opening of the school to the eco-environment of information (Liquète, 2002), launches again the controversy about the responsibility of the pupils and that of the teachers, who often have to cope with the worst difficulties, trying to "control" the situation.

5: The time devoted to T.P.E.:

Even if most of the time devoted to the T.P.E. is not included in the programme and initiated freely by the pupils themselves, the T.P.E. is shared out on the basis of one semester of teaching, with a minimum of two hours per week. Such a unit is longer than the former ones used to be, but it still remains quite short in comparison with the volume of yearly teaching for the pupils.⁷

6: Some objectives of production:

The framework of T.P.E. does not expect only one type of production from the pupils, but mainly a combination of information products and of situations in relation with communication. As a priority, they involve three productions which are radically different from each other.

The first level of production is **individual**. It consists of:

- on one hand, a log book ; that is, an individual follow up of the project where the pupils show self-analysis skills and express their successes and difficulties. The purpose of such self-assessment concerns both the processes as well as the R.I. results obtained.
- On another hand, the T.P.E. ends in an individual exercise of viva by the pupils, mainly about the documentary product achieved, in front of a jury composed of three teachers (most of the time partners of T.P.E.).

The second level of production is collective and consists of the final documentary product elaborated by a group of students. The productions are extremely varied but they all comprise information research. Some documentary files, some posters, some reviews of the press, some websites, some CDRoms, etc...are available.

7: The final assessment:

The assessment is based upon the three productions quoted above (the final product, the log book, and the viva). The purpose of the T.P.E. is to assess the candidate in a variety of individual or collective situations concerning the results obtained as well as the stages of the project and of the process.

Moreover, the teachers admit that they have to face certain difficulties when assessing the part and the investment of personal work in a collective project, and also more generally the processes and the strategies used by the pupils especially in the active stage of R.I. Though he is commonly defined as a teacher “of information”, the documentalist-teacher is quite often still evicted from the viva. The very strong hold of the discipline programmes on the cross-disciplinary projects has to be pointed out. Altering centuries-old conceptions of knowledge will take a long time (Morin, 2000)

As a conclusion, after a further survey of some major and systematic criteria of assessment, we notice that they deal more with the final product than with the documentary process and the pupils’ mental conception of what information consists of.

8: The massive entry of the Internet into a pedagogical unit aiming at ratifying the pupils skills and discipline knowledge:

To finish with, one strength of this new unit rests in the Internet becoming the main provider of information and help for the pupils’ first identification of information. Consequently, the network is both upstream and continuous as regards the project in the long term, as the pupils regularly confront their first research results with regular returns to the Web.

The surveys conducted up to now in the framework of this new unit emphasize the appeal of the Internet for the pupils. Most of them are rather motivated to work with such a tool, though they admit they appreciate the interventions of the documentalist-teachers in order to put the Internet into a “reasoned perspective” especially by confronting the results of the R.I. with some non-virtual documentary sources available for them in the C.D.I. and in their surrounding environment.

Some New Inter-Disciplinary Situations, Some New Collegial Structures

The constant discipline referents

Implementing the T.P.E. involved associating some disciplines which had not necessarily any immediate links nor common notions in their respective teaching programmes. Most of the teachers questioned explained that the pupils were amazing in their ability to perform teamwork, to communicate their work to the teachers, especially during the oral viva (which definitely ratified the T.P.E.). However, such apparent trans-discipline satisfaction hides a certain amount of regrets which show that each discipline specialist is deeply attached to his own discipline referent in the appreciation of the pupils' work and process. I am going to quote an example reported by Christiane Etévé (Etévé, 2001) in the study we conducted⁸ on a viva, the theme of which was "Women at work during World War 2", in association with a literature teacher, a history teacher, and a documentalist-teacher. On this occasion, the literature teacher told the pupil:

You have put a lot of effort in that clear, well-documented report (...). You have found some information or literature texts and some images about women taking an active part to production or a moral support, whether it is on the back lines or on the front ones, but I would have liked the expression "female correspondent for soldiers on the front" to be mentioned.

Such remark shows well that the teacher, even in a multi-discipline unit, sticks to his discipline field and fundamentally expects only one notion which is significant in his own teaching programme. Then, the history teacher claimed:

You have clearly shown that the emancipation of women was initiated by conquering such work which started in weapon-factories but I expected the word "munitionnettes" (defining the women working in such factories).

At last, the main remark from the documentalist-teacher was:

You have selected a relevant information from the Internet but you do not mention its bibliographical reference nor the site you consulted.

Worse again, as with such type of assessment, the documentalist-teacher confirms his institutional position in the paradigm of "technical documentation by processing the contents" (Fondin, 2002) and thereby chooses a position which differs from that of most traditional teaching disciplines. These various comments from the three teachers certainly show a very strong commitment both on a personal and discipline level to convey some notions and methods which cannot be circumvented. However the T.P.E. unit does not appear to have succeeded in building in a collective way common objects and notions.

Discipline contacts

Though the T.P.E. units are focused on cross notions and reference concepts, we have to admit that the inter-disciplinary aspect is often viewed by the parties as bridges between the disciplines within the same reflexive field. The combination of two, even three disciplines (out of the documentation) that we found, principally brings three fields together:

- the field of "classics" with History/ Geography, Economic and Social Sciences, and Literature
- the field of "pure Sciences" with Sciences of Life and Earth, Physics and Mathematics
- the field of "Arts and Culture" with modern languages, plastic arts, and musical education.

Apart from any interaction between the disciplines, it is rare, even exceptional, to see a T.P.E. associating for example, History with Physics and/or Plastic arts. More or less consciously, the teachers accept the official views which mention an inter-disciplinary aspect in order to help the pupils link the various types of knowledge between themselves. But our survey and an analysis of the facts show us that such associations are far more limited and do not go further than one of the three meta-discipline fields quoted above, where experience, the legitimacy of knowledge and the transferability of notions are emphasized.

In this framework, the documentary integration is quite slow and has to face lots of obstacles. The inter-disciplinary contacts provide the Documentation Centres and the documentalist-teachers with various time-and energy-consuming tasks, in relation to the organisation of the T.P.E. Each stage of the project -up requires follow-up from the selection of a corpus of documents to the technologies of information necessary to the final achievement of the project becoming operational. However, though documentation was for a long time regarded as “a service at the service of pedagogy” by the teachers, it becomes gradually more and more visible. It now benefits from the expansion of the latest techniques of information/communication (Internet effect) and demonstrates the first fruits of a “documentary didactic” (Béguin, 1996) or of information (Charbonnier, 1997). Little by little, some types of writing and some methods of information processing have proved to be necessary to achieve a documentary product in T.P.E. The T.P.E. requires beforehand teaching which up to now wasn't available for the pupils: taking notes, a synthesis, a condensation of a document, an analysis of the images, the elaboration of a scheme, the preparation of an oral communication, a structured argumentation. New views of the School Documentation Centre work can appear among the teaching community thanks to such a framework.

The didactic continuum of the follow-up tools

We have no option but to admit that the T.P.E. units rely on a constant and regular follow-up of the pupils both for the collective and individual aspects of their work. But, the Ministry of National Education beforehand chose a range of options for every school, shown in its directive leaflets (distributed at the beginning of each session), log books (in order to follow the process of the pupil all along the T.P.E.), and methodological guides. At first, such objects appeared to be tools open to any kind of interpretation from the teachers' part - sometimes rejection, sometimes an appropriation surprising to the school institution, and often acceptance by the teachers as a pedagogical guide to the T.P.E.

Then, after a softening of the habits, the documentalist-teachers played a key-part at the level of the school, as they were often more likely to explain them to their colleagues and to the pupils. Moreover, lots of documentalist-teachers worked on unique and common versions of the documents, making them available for the C.D.I. as well as for the Intranet of the school. Then, gradually, a shared culture was elaborated in order to construct a set of common collection.

The meaning of the words

The preparation exchanges for the T.P.E., the construction of working-sessions, the joint trainings in the pupils' presence, enabled the teachers and the documentalists to notice that sometimes the words, the terminology, the jargon used by some of them, didn't have the same meaning for the others. Little by little, in the framework of such inter-disciplinary units, each party learns how to become acquainted and understand the other. Some misunderstandings, interpretations, apprehensions decrease after the words are explained. We have noted here and there a few significant examples which, according to the documentalists we questioned, enabled the teachers to give more consideration to the complex situation the pupils had to face when under similar words, the discipline referents and the teachers' expectations are different. In order to illustrate our example, we have mainly located:

- the notions of “primary document” and of “secondary document” for the historian and the documentalist
- the notion of “authentic document” for the modern language teacher and for the documentalist
- the notion of “silence or noise” for the documentalist in comparison with the physicist
- the notion of “completed task” for the documentalist in comparison with the musician or the plastician.

The modification of the expectations about the pupils assessment

Assessment is a specific, reflexive time for the pedagogical teams. No longer does it deal only with the final production and the oral viva of the T.P.E., but it is conducted regularly all along the research and information restitution process. The former and intermediary processes are assessed by the teaching team, and the capacity for self analysis shown by the pupils while approaching the subject, is taken into account (as an example, the log book) (Duplessis, 2001).

However, the environment becomes more complex when we observe which teachers are associated in the assessment. We have got no option but to notice that about 70% of the documentalists we questioned confirmed that they were not associated to the final assessment, that is the oral viva, whereas they were following a whole class and their projects.

The documentalist-teacher seems to be excluded from the oral viva, which becomes the ultimate time for consultation and exchange about the conventional discipline contents.

The Information System And The Documentary Management In The School

Gradually, the pupils and the teachers show a certain tendency to learn how to become acquainted with the documentalist-teacher's activities and they particularly rely on him to prepare, to animate and to guide their learning. His professional image has shifted from that of a mere manager of the documentary holdings, to the more complete one of a consultant as regards methodological research and expert as regards information contents. Such extension of his representation and field of action makes the articulation of mission a complex task for the profession of school documentation (Chapron, 1999).

Sixty-nine percent (69%) of the documentalist-teachers questioned claim that they are supports for the collective work of the pupils especially during the stage when common productions are achieved, such as bibliographies, documentary files, web pages. Such will from the documentalists' part really created new forms of solidarity and of organised shared work, by privileging the group rather than the pupils' strictly individual strategies and results. After considering the survey we conducted, four essential trends seem to define the new aspects of the documentalist-teacher's mission.

An active intermediary in information

Before, for most documentalist-teachers, the T.P.E. were interesting insofar as they created authentic situations for information research, combining various approaches and discipline contents, the research and the method of which were at the core of the unit. The "C.D.I. tool", as well as the class space, no longer hold a central place of reference in the pupils' and the teachers' information system. The information research method, the analysis of their contents, and their re-writing in a purpose of shared communication, are at a crossroads of the projects. The documentalist-teacher claims that his position is that of a link in order to guide the teachers and the pupils in the C.D.I. and outside, in other places in the school and out of the school. Such mediation reinforces the obligation for the documentalist-teacher to be well-acquainted with the information on offer in the surroundings (Boyer, 2002).

According to the documentalists, in order to succeed with the implementation of the T.P.E. and to ensure an efficient mediation, the three prevailing trends would be – in an descending order of importance, a reinforcement in the collaboration with the teachers, the consultation and the training of the pupils (Data 1). Inversely, the three points which are the most difficult to implement are, once again in a descending order of importance, that very consultation, the follow up of the pupils' work and the final assessment of the pupils (Data 2).

The documentalist –teachers admit a significant change in their relationship with the pupils. They feel better acknowledged thanks to their missions and skills being more visible. The T.P.E. seem to constitute an image-enhancing unit for them, on the whole.

As a counterpart, many of them express their difficulties in working jointly with certain teachers, which often obliges them to perform insistent interventions with the pupils, especially as far as the stage of active research of information is concerned. Mediation remains an essential action, a continuum for the time devoted to research by the pupils "out of the T.P.E. time".

Figure 1

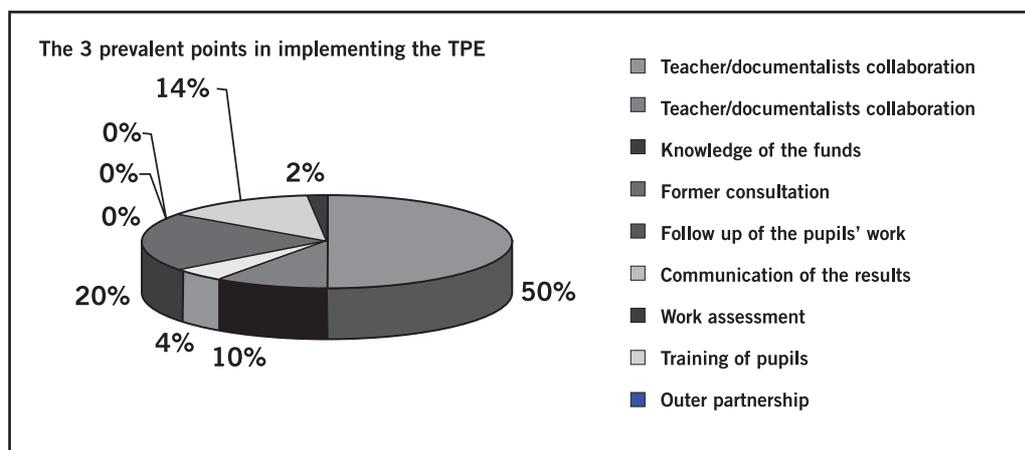
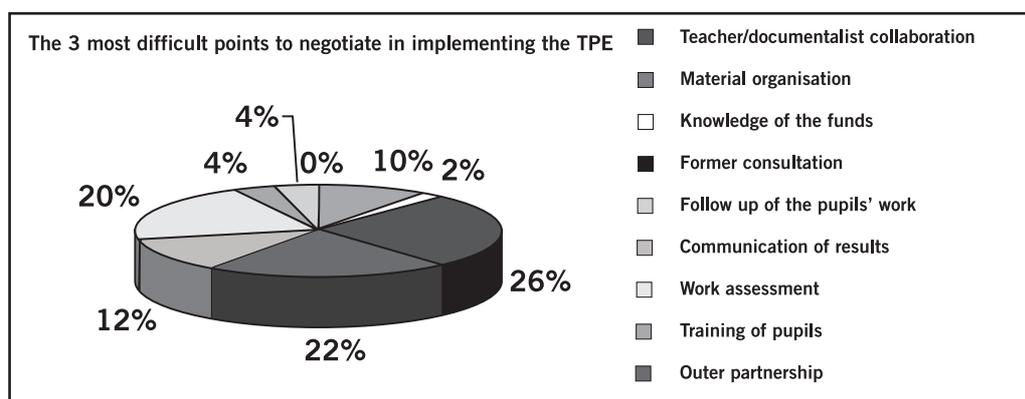


Figure 2



A supervising guide of information on the Internet

The main institutional providers have organised part of their information on line in order to promote the implementation of the T.P.E.¹⁰, and thereby they have guided the educationalists towards some institutional sites with a proper reference. By surveying such practices, we can notice now a broader research process where pre-selected sites offered by the documentalist –teachers are more numerous and more varied than the institutional and/or pedagogical sites on offer. Consequently, the Internet obliges the documentation professional to see to the conditions of the information offered on a regular basis, which compels him to give a new orientation to his process of information handling, in which gradually the non-virtual documentary sources no longer fill a unique even central space. An incompressible time is devoted to checking the information off-line which is likely to be included in the pupils' documentary project, in fields as varied as sciences, cultural offers, architecture, ...

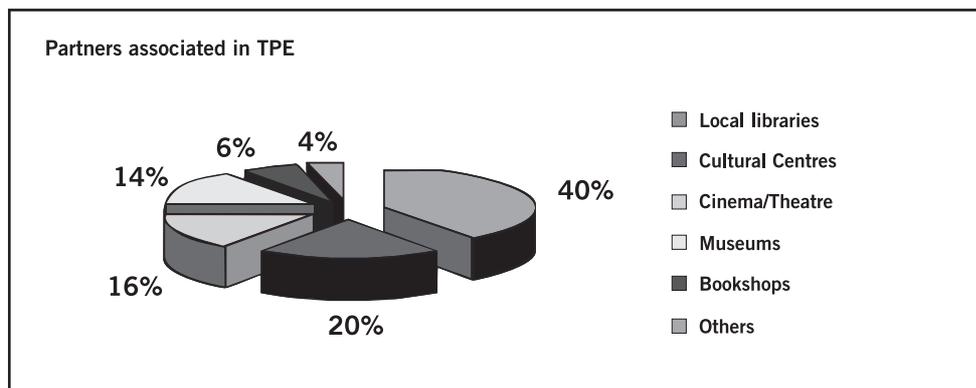
A methodologist for information

The documentalist-teachers would be required to focus more on a set of methodological processes especially in the field of information research, identification of subject sites of reference or analysis of information around relevance criteria. According to them, an improvement of the reception and work conditions around methodology would be tightly linked with the installation of a larger and more functional work-space, as well as with a voluntarist policy as far as recruiting professionals is concerned (Documentalist-teachers and their assistants).

In parallel, in order to facilitate the development of the T.P.E., it would be necessary, according to them, to promote some authentic conditions for information research, which would imply, among other things, resorting to the documentary funds and to the services of various information structures (local libraries, cultural centres.Data 3).

However, an approach by such method would demotivate the parties: the pupils as regards their wish to use the Internet systematically whichever the elaborated research project, or the teachers confronted to their immediate preoccupations in relation with the contents of the programmes, which results in isolating the documentalist-teacher in his methodological approach of information research.

Figure 3



Positioning the C.D.I. with regard to the information environment

The school C.D.I. can no longer be regarded as the documentation providing “core”¹¹ information but as a first intermediate offer among various sites combined with it. From then on, apart from the central space filled by the Internet, the documentary and library surrounding structures (especially the local libraries) fill a considerable space and are strongly resorted to by the pupils, similarly to the C.D.I. The still extremely strong central position of the C.D.I. continues exclusively in the most remote geographic parts, where the non-virtual offer of documents is restricted to the documentary sources of the C.D.I.

The Drift Risks

Before concluding, we would like to emphasize a set of fields which show that the choice to include some systemic educational processes into information, via generalizing a T.P.E. type, inevitably poses a set of new problems which the parties of school education and documentation had not obviously considered before. In the actual French Educational System, the main question is, in order to educate to information, is it necessary to develop a set of “T.P.E. like” units, or to include some information and documentation teaching on some bases which can be comparable to those of other disciplines, or to entrust this additional mission to the actual teaching disciplines.¹² The question is particularly complex and it may not be the only one, but it seems obvious that the “innovative” until like the T.P.E. reveal a set of barriers.¹³ We have identified five main ones:

A confirmed trend to technical walling up

Gradually, insidiously, the mastery of the tools, of the computer and digital technology, and of the networks, seems to prevail on the results of the information research obtained by the pupils (Tardif, 1998). After the first stage of seduction, we can notice that the pupils spend more time with the various techniques, at the detriment of the time for research preparation (questioning, expressing the problem and brainstorming) or of the time for reading / re-writing according to a corpus of documents which come from several sources and sites. Moreover, a strong majority of questioned pupils (68,5%) consider the T.P.E. exercise as a research exercise on the Internet. The teachers in all disciplines will have to conduct an explanatory preparation for the learners, in the future (Perriault, 2002).

An emerging documentary dilemma : the relationship between the documentary management and information management

On a political level, the generalization of such type of unit in the French educational system¹⁴ didn't result in new appointments of documentalist-teachers in schools. Thus, the documentalist-teacher has to conduct simultaneously an effective handling of the information in the C.D.I., which he continues to manage on a daily basis, while ensuring the follow up and the support of the pupils during the stage when they put together their T.P.E., which requires in the same way fundamental teaching linked with information research, with the culture of sources, and with a critical comparative analysis of the contents, etc.. This double responsibility as an information teacher and manager is more and more heavy to bear, especially in the schools with big class sizes¹⁵, and eventually opposes both functional tasks which are tightly linked.

Moreover, after the first years of experimentation, we note that the documentary magnitude expected by the teachers in the T.P.E. essentially concerns the search for a certain operational aspect in the C.D.I. Information system. The latter implies a lesser participation to the training actions in time, from the documentalist's part. Some teachers even prefer self-training or training among colleagues from the school, in order to be able to conduct information research by themselves, without any intervention from the documentalist-teachers' part. For many of the latter, when questioned, the effects noted rest on a "scale change", since there has been a growing demand for a few months, but quite often on the same bases of exchange and questioning as before the implementation of the T.P.E. The role of the documentalist seems to have been reinforced around the first initial function Eric de Grolier calls the "connection process" between "those who need to know and those who know, by organising the memories instead of the knowledge" (Fayet-Scribe et de Grolier, 1996).

A shift of the pupils work from the collective sphere in schools, to the private sphere at home

This very point constitutes, in our view, a social and political major obstacle. Consequently, the quantity of work, of energy, of necessary doubts, make the school-time devoted to T.P.E. largely insufficient. Then, one part of the T.P.E. is achieved out of the teaching time, but also out of the school time. A "social discrimination barrier" then appears between the pupils who detain information and its access from their home, and those who are "poor, information wise" and who have to use complex strategies in order to conduct such work (attending various local libraries, researching various connection points for the Internet,...). A new territorial aspect of school then appeared, where the "Domus" according to Weckerlé's meaning, becomes a functional complement for the school space for the better off.

But can school introduce and ratify some learning units which reinforce the inequalities, especially those in relation with the right to access and the mastery of information whereas it still has to deal with the worst difficulties as regards the democratic access to literacy especially?

An inflationist logic

As we formerly explained it, the central spirit of the T.P.E. was to lean on the pupils' construction process and on new forms of expression in a concrete situation (work ratified in small groups, final viva in order to argue the choice of how the subject should be treated). Gradually, the teachers were more seduced by the achieved final product, than by the processes, the choices of information selection, or the quality of restitution. In order to illustrate their speech, the teams we have met, the documentalist-teachers we questioned, have systematically shown us the better achieved final products, the "most appealing"¹⁶ ones in their form, at the risk of forgetting more or less consciously the pupils' process. In the schools where we inquired, some documentalists in agreement with the teachers involved in the T.P.E. even cancelled the first stage of the work by offering via the documentalist a corpus of pre-selected documents, erasing thereby any stage of the information research, of comparison in the research results, of refinement... the pendulum movement between doubts and answers, which remain indispensable to build up a meaning and to adopt a scientific questioning (Giordan, 1998). Consequently, we can say that the form prevails on the contents.

A weak transfer of T.P.E. learning to discipline teaching

As a conclusion, in the documentalists'view, the processes and methods learnt during a T.P.E. may not have been responsible for a transfer of learning from the pupils' and the teachers' part to more conventional situations in mono-discipline teaching. Out of the time devoted to T.P.E., 77% of the documentalists essentially feel that the specific learning mentioned in T.P.E. does not necessarily lead to specific reflexive situations.

Moreover, the pedagogic extensions about the themes during a T.P.E. are nearly non-existent for the surveyed schools. Would it be rather an exercise for exercise's sake, where the barrier of mono-discipline teaching would win? It's impossible to erase centuries of mental representation of knowledge.

Conclusions

Undeniably, the T.P.E. type units initiate an awareness in the school of the need to train young citizens in the culture of information.

In such a scheme, the educators' and documentation professionals' missions are noticeably altered and some new forms of organisation of learning and building up of knowledge, appear. However, as a counterpart, however commendable they may be, the innovative units based upon research, selection, analysis and a re-writing of information seem to reinforce some traditional practices – contributing to certain forms of withdrawal, even to some new forms of social discrimination which have to be taken into account, and about which the parties and researchers have to question themselves, in order to take action on such situations. The documentalist-teacher seems to be likely to play a specific part in that collective reflection.

Notes

- ¹ Four sources of observation: the circulation list “T.P.E. –T.I.C.E.” (http://www.educnet.education.fr/listes_educnet/tpetice.htm), the balance of years of functioning available on Educnet (www.cndp.fr), the bulletin about EPI-Net (www.epi.asso.fr) and at last the references of “Café Pédagogique” (www.cafepedagogique.net).
- ² List of documents quoted in the official text.
- ³ The pupils in high schools are generally aged 15 to 18. As the last stage before university, the high-school teaching is divided into three years (fifth form; sixth form and final year).
- ⁴ Ministry of the National Education. *School Teaching-Implementation of Supervised Personal Work T.P.E. high-schools. New school year 2000*. Paris : Men, 2001, 60 p.
- ⁵ Passing the “baccalauréat” is a pre-requisite for entry in university.
- ⁶ The links between the disciplines are established thanks to references proposed by the Ministry of National Education, each new school year. For example, “The City” (Sixth form – Economics and Sociology branch), “The Water” (Sixth form – Science branch), “Representing the War” (sixth form – literature branch).
- ⁷ In a school, the time devoted to teaching is estimated at more than 30 weekly hours.
- ⁸ This work is a research programme called “Information and pedagogical training of the teachers in the field of documentary help for the pupils” (n° 20506) in association with the National Institute of Pedagogical Research in Paris and especially the IUFM (Bordeaux).
- ⁹ This is particularly true when the crucial moment of assessment comes for the pupils, especially the final one.
- ¹⁰ In the research unit in Bordeaux, we have registered more than 50 French sites of reference about the T.P.E., gathering some sites linked to the themes of the programmes, some others where discipline prevails exclusively, some focused on assessment time, some others using records from pupils' documents, and to finish with, some sites provided by parents' representatives associations and inspection bodies.
- ¹¹ In France, in the 90's, a professional literature used to define the Documentation and Information Centre as a “centre”, a “core” in a school. Such centripetal approach of the situation no longer enables us to analyse the various situations observed.
- ¹² In relation with the subject, it would be necessary to read the Acts on line of the National Conferences for Information Education, which took place in Paris (France) – March 11th-12th 2003. Cf. <http://www.ccr.jussieu.fr/urfist/Assises>.
- ¹³ A quotation of the general title of the 32nd international Conference of IASL, that is “*Breaking down barriers*” (Durban, July 2003).
- ¹⁴ There are also the “Discovery Routes” (I.D.D.) for the pupils aged 12-13, “Civic, Legal and Social Education” (E.C.J.S.) for newcomers to high-schools aged 16, etc.
- ¹⁵ In general teaching high schools, the number of pupils can be superior to 1500 pupils.
- ¹⁶ For example, CDroms of “Urban Art”, video reporting.

References

- Béguin, A. (1996). Didactique ou pédagogie documentaire? *Ecole des Lettres. Collège*, juin, numéro spécial, 49-64.
- Bernstein, B. (1997). Ecoles ouvertes, sociétés ouvertes? In Forquin, J.C. *Les sociologues américains et britanniques* (pp. 65-164). Bruxelles; Paris: De Boeck ; Institut National de Recherche Pédagogique.
- Boyer, M. (2002). La réforme des lycées: les T.P.E., un enjeu à saisir. *Inter-C.D.I.*, 176, 8-14.
- Chapron, F. (1999). *Les C.D.I. des lycées et collèges*. Paris: PUF. (Education et formation. L'éducateur).
- Charbonnier, J.L. (1997). Les « apprentissages documentaires » et la didactisation des sciences de l'information. In « Documentation et formation ». *Spirale*, 19, 45-59.
- Chervel, A. (1998). *La culture scolaire*. Paris: Belin.
- Duplessis, P. (2001). L'évaluation diagnostique: vers une didactisation des apprentissages documentaires. *Inter-CDI*, mai-juin, 7 -12.
- Etévé, C. (2001). Education à l'information ou recomposition disciplinaire dans les lycées: le cas des T.P.E. Congrès international AECSE, Septembre, Lille.
- Etévé, C. (2001). Les T.P.E.: une occasion de repenser l'éducation à l'information. *Argos*, Avril, 48-51.
- Fayet-Scribe, S. (1996). La passion de l'organisation des connaissances: entretien avec Eric de Grolier. *Documentaliste-Sciences de l'information*, 33(6), 4 p.
- Fondin, H. (2002). La Science de l'information et la Documentation, ou les relations entre science et technique. *Documentaliste-Sciences de l'information*, juin, 3, 122-129.
- Giordan, A. (1998). *Apprendre!* Paris: Belin.
- Jacob, E. (1997). Context and cognition: implications for educational innovators and anthropologists. *Anthropology and Education Quarterly*, March, 28(1), 3-21.
- Liquète, V. (2002). *Etude des pratiques documentaires et informationnelles du professeur de collège*. Lille: Presses Universitaires du Septentrion.
- Morin, E. (2000). *A propos des sept savoirs*. Nantes: Pleins feux.
- Pantanella, R. (2000). *Les T.P.E., vers une autre pédagogie*. Amiens: CRDP.
- Perriault, J. (2002). *Education et nouvelles technologies. Théories et pratiques*. Paris: Nathan université. (128).
- Tardif, J. (1998). *Intégrer les nouvelles technologies de l'information*. Paris: ESF.

Biographical Note

Research Unit EA 487 Scico – Bordeaux 2 University. Lecturer at the University Institute for the Training of Teachers in Bordeaux (France). Responsible for the Common Service of Documentation in the Institute. Researcher in Information and Documentation Sciences in the Cognitive Science (SCICO) research unit in Bordeaux 2 University. Author of various scientific articles about Information and documentation Science, and education Science. International Communications (Boston, Buenos Aires, Dakar, Berlin, Paris,...) Email: VLIQUETE@aol.com

Penny Moore and Maureen Trebilcock

Auckland College of Education

New Zealand

In New Zealand school libraries, the nature of educational activities performed by school library staff is unclear. Three parallel case studies were conducted to explore the actual work of school library team members. Ways of working with teachers and each other were explored in interviews and focus groups and the characteristics of information service provision were compared with those reflected in the wider literature. While many practices were affirmed for their positive influence on teaching and learning, areas for further development were identified. These are discussed in terms of creating change and strengthening learning outcomes.

In assessing what schools can do to make a difference to literacy outcomes, the Programme for International Student Assessment (PISA) 2002 report notes that where student use of resources, such as the school library, computers and Internet, is “relatively high, mean reading scores tend to be higher, even when other factors are discounted” (OECD, 2002, p. 22). Affirming but predating this conclusion, American research indicates that well-developed school library programmes have a marked, positive effect on learning outcomes in a wide range of school community contexts (Lance, 2000; Lance, Welborn and Hamilton-Pennell, 1993).

Through these and other studies, the use of school libraries and associated instructional activities has been correlated positively with students’ learning outcomes from a variety of viewpoints. However, research also shows that there are some severe impediments to the implementation of such programmes. For example, there is a perceived lack of understanding of the intellectual role of the library that leads to the resource (including ICT facilities) and its staff being undervalued and poorly supported (Todd, 2002). Moreover, positive correlations rest on the assumption that where there is a school library, there is also a school-wide, coordinated programme of educational activities led by a skilled practitioner. Where this is not the case, one must ask, what are those responsible for school information services doing to influence teaching and learning, how are they working together and what would a school library programme add to their effectiveness?

Haycock (1999) states that quality school library programmes exemplify specific foundations, or prerequisites, for success. These include “having:

- a stated aim for the programme
- a clear definition of the role of the qualified teacher librarian
- a priority on collaborative programme planning and team teaching between the teacher librarian and classroom colleagues
- a systematic approach to teaching an information process based on a school-based continuum of information skills and strategies
- flexible scheduling of classes and groups, and
- appropriate and effective program and personal evaluation by administrators.” (p. xi)

These points indicate that a particular school library philosophy has been adopted and there is a commitment to the establishment of baseline conditions, but it may take time for that commitment to be realised.

According to Loertscher (1988) the school library programme itself is founded on three functions: solid warehousing support, direct services to teachers and students and resource based teaching. These underpin learning and teaching across the curriculum to develop reading motivation, research skills, information analysis, technology skills, cultural literacy and support for specific student groups. The three functions are the focuses of core action by school library staff. In this context, the teacher librarian is said to be responsible for the creation of a developmental, vertical programme addressing these aspects of learning and is accountable for the excellence of that programme. The complete programme may not come to maturity instantly however and different aspects of the instructional programme are likely to take priority as a result of the needs of students, resource availability and educational priorities within an education system.

In addition, guidelines from Australia (*Learning for the Future*, 2001) capture five critical relationships centred on the role of the school library:

- learners and learning
- teachers and teaching
- resources and the curriculum
- access to information, and
- the physical environment

These relationships are facilitated and enriched through the knowledge and expertise of those developing and delivering the school library programme. A significant level of agreement about essential elements of that professional understanding is reflected in role, task and responsibility descriptions produced by, for example, the American Association of School Librarians (AASLA) and the Canadian School Library Association (CSLA). In some countries, for a variety of reasons, these reflect aspirations rather than current realities.

Any initiative to improve student learning outcomes and realise those aspirations implies a need for evaluation of learning and of the initiative itself. School library programmes are no different. To assist in programme evaluation, Loertscher (1988) developed a series of taxonomies that describe ways in which library staff, principals, teachers and students function in relation to utilisation of school library and information services in teaching and learning.

Taking the relationship between school libraries and learning a step further and providing long term goals, Henri (1999) discusses the concept of 'information literate school communities'. This emerging concept is giving rise to identification of potential milestones for evaluating a school's progress in establishing a culture in which the focus is on learning and development of abilities essential in the information age (Henri, Boyd & Eyre, 2002). Student learning outcomes are a key concern, but attention is also given to the teacher as a learner and to overall knowledge management within the school.

From the above, seven dimensions of school librarianship can be distilled to guide consideration of current effectiveness and the potential gains resulting from development of school information services comparable to those correlated with an increase in student literacy and academic performance:

- Underlying philosophy (vision) and critical conditions for effective implementation (Haycock, 1999)
- Structural components focusing action and underpinning programme development (Loertscher, 1988)
- Critical relationships informing action (*Learning for the Future*, 2001)
- Tasks and responsibilities of the school library team (AASL & CSLA)
- Essential teaching and information expertise brought to the tasks, (AASL & CSLA)
- Responses to all of the above by school staff and students (Loertscher's Taxonomy, 1988), and
- Milestones for monitoring progress towards establishment of information literate school communities (Henri, Boyd & Eyre, 2002).

These dimensions have several facets in common and the themes that unite them are captured in the six principles identified in *School Library and Learning in the Information Landscape: Guidelines for New Zealand Schools* (Ministry of Education and National Library of New Zealand, 2002). These principles focus on:

- information literacy
- reading
- access
- information resources
- place
- service

These guidelines state that “people are the key to the library’s role in raising the students’ achievement” (p.23) thereby reinforcing the view that the nature of learning and teaching relationships with school library staff are of paramount importance. The study reported here examined those relationships in three New Zealand schools.

New Zealand Context

The contribution of New Zealand school libraries to learning has been examined through quantitative survey research (Chalmers and Slyfield, 1993) and some school libraries appear to be highly effective in supporting learning. However, the evidence to date does not reveal actual teaching practice or ways in which school library staff work with classroom teachers to promote student learning. While the new school library guidelines give advice based on six principles, there is a need for complementary recommendations that will enable school leaders to examine curriculum design and teaching practices to make optimal use of school libraries and information technology. A further spur for examining the contribution of school libraries and their staff to teaching and learning is the implementation of the National Certificate in Educational Achievement (NCEA), a new secondary school qualification that makes heavy demands on information literacy and research skills.

While few New Zealand schools have full-time, qualified teacher librarians (TLs), they all have long had libraries, together with a pedagogical emphasis on constructivism and resource based learning, particularly in the primary schools. Their libraries or information centres operate in a variety of ways, often with responsibilities shared among teachers, librarians, paraprofessionals, parent volunteers and students themselves, hence use here of the inclusive term ‘school library team’.

Several elements of effective school library programmes are expected to be present in New Zealand schools, but the extent to which the notion of the ideal school library programme is in operation is uncertain. It may be that a different model to ensure that the investment in school library and information centres is used to best advantage emerges in light of local constraints. To promote improvement on present practice, therefore, the following study examined three schools in light of dimensions of school librarianship known to lead to excellence.

Research questions focused on the following issues:

- In what ways do the SLT and teachers collaborate in terms of their roles, in development of classroom programmes and the use of information and communication technology (ICT)?
- What educational activities are initiated by school library teams?
- How is the effectiveness of these activities evaluated?
- In what ways is that effectiveness apparent in student performance?
- What constitutes best practice as perceived within the team and by other staff?
- What is the nature of the students’ perceived response to this practice?

The study was exploratory, with perceptions and misperceptions of stakeholders becoming evident through semi-structured interviews. Findings will be used to inform further research and professional development opportunities.

Method

Participant selection

Researchers used the term 'school library team' (SLT) to describe varying arrangements known to exist in schools where full time teacher librarians are not necessarily employed. The term was expected to refer to working groups ranging from loose associations to tightly organised, formally recognised, collaborative partnerships. For the purposes of this study, the SLT is, therefore, defined as those people who have responsibility for the efficient management and utilisation of the school library. This team may include the principal, the Teacher with Library Responsibility (TLR) or the Teacher Librarian (TL), support staff, classroom teachers and students. In some cases parents and members of the Board of Trustees, the governing body of the school, may have an active role.

Recommendations for selection of 'good' school library teams in Auckland were sought from three independent sources: lecturers in teacher librarianship, school library advisers, and the national executive of the School Library Association of New Zealand Aotearoa (SLANZA). There was a high degree of agreement in the recommendations received. A primary/elementary school catering for students between 5 and 11 years, an intermediate for students between 11 and 13 years and a secondary school for students ranging from 13 to 18 years of age were selected to reflect differences across the compulsory education sector. The schools varied in size and the socio economic standing of the communities they served.

Although having a trained teacher librarian was not a criterion for selection, two schools had had one for more than eight years, while the third SLT leader had dual qualifications in teaching and librarianship. All three schools had support staff in the library, none of whom had formal teaching or library qualifications. The context of SLT operation in the intermediate school was complicated by the fact that each year a third of the teaching staff were new appointees, often in their first or second year as teachers.

In each school, the principal and Teacher Librarian identified the SLT members for interview. In addition, class teachers were invited to participate in the study on the basis that they had worked closely with SLT members for at least one term and perceived this association to have benefits for their teaching and student learning outcomes. In the event, those interviewed were principal (3), teacher librarians (3), support staff (7), members of the SLT who were also teachers (6, but none in the secondary school), students (14) and, in two of the schools, members of the Board of Trustees and parents (3). Different SLT structures resulted in the primary school contributing more interviews (23) than the other schools (12 each).

To take account of differing perspectives, the interview schedules varied slightly according to whom was being interviewed. For example, principals and SLT leaders might have an overall vision for school library services, but students would be unlikely to be able to comment on long term plans.

Data collection

Data collection used semi-structured interviews, focus groups and examination of school documentation, for example policies and plans. The interview team of five participated in training to increase the level of reliability in interviewing technique. Interviews were recorded on audio-tape with the permission of interviewees, who later verified the accuracy of transcriptions. Finally, researchers and their assistants noted their personal impressions of relationships between factors, attitudes and events in post-interview field notes.

To analyse the data, the verified transcriptions were coded in terms of school, information source (role of participant), interview question and content. The content codes emerged from the data themselves, with some categories providing sufficient depth of information that several sub-codes were required. Triangulation between the different data sources ensured greater reliability of interpretation.

The resulting case study descriptions do not allow generalisation to all schools of their type, but do identify factors against which similar schools may reflect on the effectiveness of their own SLT, what ever its form. In addition, as with any interviews of this type, the content reflects those aspects of the topic that were salient to participants at the time of the interview. The study, therefore, represents a snapshot of a misty landscape rather than panorama on a sunny day.

Results and discussion

Underlying philosophy and critical conditions

The overall research question was what does the SLT do to influence teaching and learning? However this question cannot be answered without reference to the philosophical and cultural underpinnings that positioned the library in each school. All three principals expressed strong affirmation of the place of the library in the culture and intellectual life of the school, stressing its role in learning and teaching and the critical nature of the expertise of the SLT leader. The depth of this commitment is apparent in the following statement from the principal of the primary school:

“... the school has been determined not to lose [the TL position] so there's been considerable emphasis put on ensuring there are sufficient funds to maintain it, to the extent that local funds would be used in the payment of salary. The pressure on the bulk grant for paying support staff for the library, is quite considerable, but that's where our priorities lie.” Similarly, it is particularly important to the principal of the intermediate school that the TL is “kept right up there with the play and if that means paying more for her to become even better at the job, then that is what we will do.”

The three principals saw their task as providing resources and active verbal support for the role and activities of the SLT, particularly of the TL. For example, the intermediate principal views his main input to promoting the library as one of ensuring staff appreciate the value he attaches to library activities,

“Whenever I talk to staff, they know that I regard the library as the centre of the learning community. Whenever we have a staff meeting, that's where we meet, either in the library or the ICT centre or both. It's more my role in modelling, than what I say, that proves my values to the teachers.”

However, as will be seen, there was a gap between the principals' general expectations for integration of the library in learning and the actual levels of interaction between the SLT, teachers and curriculum activities.

Although the policies, role descriptions and other documentation from the three schools demonstrated support for student learning as an educational goal, instructional programmes for literacy and information literacy that included a clearly stated educational purpose spanning all age groups or subjects were not presented to the researchers. In each school the TL's role was comprehensively described and the appointees were highly active in pursuing the general goal, but the route to its achievement was at least partially hidden from many teachers and perhaps from the TLs themselves.

In each school the TLs verbalised a focus on collaborative planning and teaching, but their commitment to, and understanding of, the term was not matched by that of teachers. Further, the TL's responsibilities were very broad and some aspects (e.g. ICT management) were eroding time for collaboration and instructional partnerships. As will be seen, few interviewees could provide evidence of any instructional collaboration, but information sharing and resource consultancies were abundant.

While all three TLs and the support staff in the secondary school referred to teaching information skills (especially those associated with technology and note taking), none had a systematic approach to teaching these across the curriculum. At this stage of development, the primary school TL had created a library activity resource for teachers to use as and when they wished, but this was not an integral part of subject teaching. It was however, well known and enthusiastically discussed by all teacher interviewees. The secondary TL had developed a research guide for students and was collaborating with teachers of English and physical education in developing curriculum activities in which it was integrated. Again, the feedback from teachers was extremely positive and the intention was to extend its use across the curriculum and all grade levels. The intermediate school's TL had not been at the school as long as the others, but had produced a variety of student and teacher guides for library and technology tasks. Again, these had a task specific rather than developmental curriculum focus.

Researchers gained the impression from interviewees that the connection between library and information centre use and learning outcomes had not been considered seriously before this study. For example, having said that support staff in the secondary school ‘take’ and ‘teach’ technology skills, one class teacher went on,

“They don’t really do any teaching. Involved in the process, but not actually teaching for learning outcomes. They’re supporting. It must mean that more students are able to complete the process because of their support and resourcing.” The researchers could not reconcile the notions that support staff are enabling students to complete the process, but are not teaching for learning outcomes. It is likely that the confusion is influenced by the general belief that support staff are not supposed to teach, even within an instructional framework developed by the TL.

This was just one aspect of the lack of appropriate evaluation of the SLT’s input to learning. It was evident in all three schools however that the SLT leaders were very aware of a need to demonstrate effectiveness. As the intermediate school TL commented,

“We really need evidence that I’m making a difference because although the Board and principal support this position, they won’t be here for ever and I need to make sure that I advocate this position. ...My gut feeling is that planning with and teaching with [others] would be more successful, but I can’t prove that.”

It may be that a framework for thinking about evaluation had not previously been available.

Structural components focusing action

The warehousing and collection development foundations of school library programmes as described by Loertscher (1988) were more salient to primary school than intermediate or secondary school interviewees. Not only was provision of curriculum plans to the primary SLT mandated in policy, it was discussed by almost all interviewees. The TL commented that in the past resources had often been inaccessible,

“...everybody would decide what they wanted, buy it and then stash it on their shelf away from everyone else, because they might never get it back. People are now very clear that all resources are for everybody. [The resources are] so well organised, accessible and quickly retrieved. The central system suits everybody now.”

Through the consultation needed for centralisation, it appears that staff had gained confidence in the TL and her skills as well as experience of working with her on a non-teaching task. The primary school principal stated that, “Every syndicate or area of the school is always represented in any decisions that are made in the library. ...The decision on resource buying always involves multi-level areas of the school.”

That almost every interviewee discussed providing curriculum information, participating in book selection and commented very positively on the degree to which the collection reflected and supported the curriculum demonstrates the reality of his perception.

This was not evident in the other schools. Indeed, although the researchers’ personal experience of the secondary school suggests otherwise, the interview data indicated little information sharing and few mechanisms for connecting the collection to the curriculum. Lack of communication of the value of sharing curriculum information to the TL was an issue in the intermediate school. To her, the connection between the curriculum, the collection and student success is critical, “...when a collection is built to support the curriculum, I think students are set up for success. In those units where it’s not, teachers acknowledge they’re setting students up for failure.” The impression was conveyed however, and borne out by the TL’s comments, that teachers were not aware of the ways in which plans could be used to ensure a close match between the curriculum and long-term collection development. Rather, the teachers’ focus was on more immediate resource provision. As a result, much of the service to teachers centred on short-term resource consultancy, not instructional partnership.

In general, services to teachers and students in these schools closely reflected emphases within the broader instructional programme, other school initiatives and the personal interests of the SLT leaders. Thus educational activities in the intermediate and secondary schools focus on providing modelling and support to teachers and students in ICT skills acquisition. This focus did not emerge as strongly in the primary school interview data, although the TL was seen by others to lead ICT developments. The primary school TL has responsibility for the school-wide reading programme and this coincides with her passion for children’s literature and drama. Thus in accord with one critical focus of a primary school, the reading programme overshadows other instructional concerns in the minds of teachers.

Support staff comments were typical of those from primary teachers, the Board of Trustees and parent interviewees, “[Her] enthusiasm rubs off. You feel like you’re learning something from her everyday. She makes you really appreciate books. You can see the turn around in kids who might have struggled with reading.”

Interview and documentary evidence from all three schools suggests that while systematic programmes may not be in place for literacy, information literacy and technology skills across the curriculum and all grade levels, solid foundations are being built and extended. However, in each school there was evidence that the TLs are over stretched by the breadth of their duties and that they were not perceived by others to be responsible for the effectiveness of instructional programmes.

Critical relationships

The ways in which the five critical relationships were addressed by school library teams were illustrated to varying degrees in the three schools studied.

In each case principals focused on learners and learning as the key relationship for SLT action. For example the school library serves intermediate students and teachers as a learning space and the SLT’s function is, according to the principal, “to focus on learning outcomes and to encourage them to improve their research skills and other things that come with the use of the school library.” Likewise, the secondary principal sees the focus of the school library to be continuing to provide for the learning needs of students. She commented that ICT developments have been a catalyst for the integration of library facilities and services with the curriculum in that, as the TL leads both library and ICT initiatives, there is greater opportunity to involve teachers who might not otherwise use traditional library services. However, none of the principals articulated the need for evaluating the school library programme in light of student learning outcomes. The philosophy was sound, but it was not accompanied by operational measures to ensure it was enacted.

In terms of teachers and teaching, the three SLTs were providing resource consultancy on a variety of levels, together with incidental professional development as mostly the TL, but in the secondary school also the support staff, worked with students to increase ICT and research skills. At the intermediate school the principal sees the TL’s position as critical, as her role is “to guide all teachers, including specialists etc, towards an effective use of the library for all learning areas” across all media. Each TL reported having run sessions for teachers on ICT skills and information literacy (especially applying a model known as Action Learning (Gawith, 1988)).

However, the TLs themselves noted that they do not work collaboratively with teachers as often as they would like. For example, the primary school TL commented that,

“... the staff changes that we’ve had over the last year or so have meant that [we are] moving from a base of extremely experienced teachers, very au fait with Action Learning, information literacy and resource use, to a group that vary in their experience, their background knowledge and in the amount of teaching experience they’ve had.”

As a consequence she focuses her collaborative energies on new and long term relieving teachers, a strategy recognised and supported by other teachers as ensuring that information problem solving approaches to teaching are maintained throughout the school. However, a barrier to further development of teaching skills was indicated in that one teacher said the need for the TL’s input had changed,

“... units have been refined over the years and perhaps do not need that input as much as we did. But we are still refining and will go back and ask do you think this will work or can you get these resources. But now we’re flying solo.”

There is a danger here that mental models of inquiry processes and teaching methods may be static, although content is changing. Similarly, in the intermediate school the TL had to work pro-actively, encouraging teachers to use her instructional design skills as well as library resource knowledge. She commented that,

“... it can be a battle sometimes to get people to realise what I can offer. No matter how many times I say I can help there will always be some teachers who don't take me up on it, and that's fine.”

The provision of resources such as a research methods booklet for secondary students and teachers is prompting teachers to collaborate with the TL in the initial stages of instructional design, with support staff then able to work with teachers and students in ensuring that information processes are understood. In this school, teachers acknowledged most clearly the role that the support staff played in direct teaching but did not link this to learning outcomes. Support staff themselves had noted that over the years the degree of assistance available to students had gradually increased. For example, now the support staff facilitate orientation programmes for year 9 (13 year old) students.

The development of a balanced collection of multimedia resources to support the curriculum is at the core of the operation of these three school libraries. In each school this provision was identified as a key practice appreciated by teachers, although teachers in the intermediate and secondary school were not as articulate about their own role in that development as were those in the primary school.

Facilitating access to information is a major focus for all SLTs. This is demonstrated in the use of flexible timetabling as well as the option of regular class visits for book promotion and selection. Assistance is also given with the information skills required to successfully access information for a particular purpose. All libraries were open for the full school day with the intermediate school also running an after school programme that included the wider community. The primary TL commented that;

“The library has a theoretically fixed timetable that is very flexible. The provision of a research area out the back means students can come in and out if they are researching. The timetable is constantly being adjusted to the needs of the teachers and curriculum commitments. I am very keen on classes having a set 'library time' because of the routine it establishes in reading promotion, reading mileage and use of the library.”

This comment reflects a need for adequate physical facilities to make flexible access a reality. All three libraries had undergone major renovations in last few years with two of the schools constructing completely new buildings. The guidance provided by National Library of New Zealand advisers was critical to ensuring creation of successful learning environments and access to resources.

All three schools had ICT facilities as part of the library complex and the information technology was obviously an integral part of the services that were provided for staff and students. The intermediate principal summed up his concerns in talking about his vision for the school as one that integrated the library and technology. He said:

"we had no ICT centre and we had to make that decision as to which way we went and I felt there was not much to be gained from having an ICT centre stuck in a room well away from anything, where kids just went in and played on the computers. I wanted that associated with the learning centre which is the library. I wasn't going to make a decision between 'in class rooms' or a centre, it had to be both.”

The shifting balance between traditional library and digital resources was continually reflected in the interview data from all schools. The secondary principal noted that the library is “a hub of learning, a real place of learning. Not just the province of the TL and English teachers any longer.”

Overall, these school libraries seemed to be the physical location of the hub of the learning community for the resources they provide, but not necessarily for the learning activities inspired. The teachers' lack of awareness of learning activity assistance the SLT can provide may be an indication of how quickly ground is lost when school library development and promotion are overshadowed by other priorities.

Knowledge and expertise, roles and responsibilities

Parallels between these two dimensions of school librarianship in the literature and in the New Zealand schools were most apparent. The roles and responsibilities and underlying knowledge and expertise were captured in job descriptions for all SLT members and in the acknowledgments of teaching colleagues. Interview data leave no doubt that teaching staff were totally confident and appreciative of the information world knowledge of both the TLs and the support staff. At the secondary school, it was observed that,

“The library staff are very well trained so when you come in and have questions they are always able to help. They take a leading role in training the staff. You never feel like a nuisance. I think the students feel the same way.”

The abilities of student members of the SLT also drew comment from teachers in the intermediate school. Speaking for her colleagues, one commented that, “Our student librarians are so well trained that they peer tutor during lessons.”

Abilities in library management and matching resources to the curriculum were frequently commented upon, as were abilities of particularly the TLs to teach information and ICT skills on behalf of class teachers. The potential for partnerships in instructional design were, however, rarely expressed.

So what do the SLT do to influence teaching and learning? This was most apparent in categorising interview responses in terms of Loertscher’s taxonomy for school library media specialists.

Responses to library service provision

Interview data elicited from admittedly partisan teachers showed that all use the library to some extent, they do not by pass the library. Further, none appeared to use the library as a self-help warehouse, rather they and their students called on SLT to respond to reference questions and generally assist in locating resources relevant to immediate information needs. SLTs actively encouraged this interaction.

Although two of the TLs described incidents where they were called upon to provide resources at a moment’s notice, in general, resource gathering was carried out in response to planning in which the SLT was not included as an equal partner. Certainly, with teachers more established in resource based teaching, there were reports of the TL being consulted briefly, often for ideas to spark thinking for activities and to identify appropriate resources.

All three TLs, but especially those in primary and intermediate schools, were highly active in promoting the school library as an integral part of learning, be it for ICT or more traditional inquiry and reading. In the intermediate and secondary schools such activities were taken for granted and were not seen as any particular promotional effort – this was simply what the SLT did.

In addition, TLs took part in formal planning with teachers to resource curriculum units that had been planned in previous terms or curriculum meetings in which the SLT had no role. Sometimes, as in the primary school, this type of planning and associated collection development was strongly based in the provision of long term curriculum plans. However, involvement in curriculum development was limited, not because teachers did not value the TL’s input, but because the TL was unable to be part of every curriculum team. In the intermediate school, the TL had elected to be part of one curriculum team each year, but teachers interviewed were not aware that this was the case. A couple of classroom teachers declared that the TL is not a member of any curriculum team. In all three schools, TLs relied on close communication with curriculum and subject team leaders to facilitate resource gathering.

It is the two instructional design levels of Loertscher’s taxonomy that expose weaknesses in the three schools studied. In the first of these, library involvement is seen as a supplementary enhancement of learning and teaching, and in the second it is seen as an essential integral element to success. In both, the TL is expected to be involved in the conception, teaching and evaluation of the resources, teaching and learning outcomes. Instructional partnerships that extend to joint teaching and evaluation were not present in these schools, perhaps because the connection between SLT activities and learning outcomes has not been explored and formal programmes for both reading and information literacy have not been fully articulated.

Information literate school communities

A clue to ways forward on this point comes from consideration of the final dimension of school librarianship. Henri, Boyd and Eyre (2002) list a series of benchmarks developed as a checklist for evaluating overall progress towards an information literate school community. Although the New Zealand School Library Guidelines refer to such communities, comparison of these three schools with those shows a number of gaps. Information technology plans and information policies are in place. All three schools clearly defend the role of the qualified teacher librarian and support professional development for all staff with regard to information literacy.

However, no information competencies expected of students at each grade level have been documented and thus systematic programmes for their development are currently absent, although data imply that an information skills programme was created for the primary school. All three TLs are making considerable efforts to ensure that information skills are taught and learned in context across the curriculum and if they personally are not involved, then they have provided teaching and student resources to assist.

The interview data imply that teachers do not to any great degree focus evaluation of learning on information literacy and evidence that students are constructing knowledge. Such evaluation is again dependent upon an understanding of what it is reasonable to expect students to do with information at each stage of development. Instead, evaluation of learning activities involving SLT input rests largely on observation and anecdote. The most concrete evidence for evaluation of learning came from a primary school teacher who is a member of the wider SLT. She reported, based on pre and post activity assessments, that, "I could see a definite improvement in critical thinking. Making judgements, making statements about plots, which the children previously couldn't have talked about." However, another observed that,

"You'd hear the year 3 teachers say that the children had learned those skills that had come from when we had first got this information resource centre and set up progressive skill development. Now we've had major changes of staff and a lot of teachers hadn't had [information literacy training], and we could see that the children were not developing these skills."

In contrast, the implementation of NCEA in secondary schools and the use of a research methods framework for teachers and students is scaffolding teachers into the kinds of learning evaluation that provides evidence for the existence of an information literate school community.

However, in this exploratory study in which interviewees were encouraged to reveal the most salient aspects of their interactions with the SLT, insufficient evidence for the existence of information literate school communities was elicited at this time.

Conclusions

Factors of size, differences in curriculum delivery and emphasis on formal assessment distinguish the activities of the secondary from the primary and intermediate school library teams. In each school these teams are valued for the resources, services and resource based teaching support they provide.

The principals and SLT leaders, the TLs, are highly committed to the support of students and teachers as learners, but although some highly productive and effective strategies for working with teachers were identified, interview data reflect incomplete understanding of the seven dimensions of school librarianship distilled from the international literature.

In sum, the philosophy espoused by the principals of these three schools is in accord with international thinking, but within their schools there does not appear to be a high level of consensus or deep understanding of the general goals expressed. In addition, without evidence of the concrete effects of collaborative instructional design and school library programme development on student learning, there is no incentive for teaching staff to engage with the SLT more collaboratively. The three schools have TLs with considerable knowledge and expertise who display educational leadership in a variety of ways that may not necessarily be acknowledged, but they have each ensured that resources for

teaching are excellent. They do, however, lack the time resources for promoting instructional partnerships. Where support staff are of a high calibre and have been in their appointments for some years, a skilled TL has been able to provide them with professional development and teaching tools that enable her to extend the sphere of her influence, supporting the learning of a wider range of teachers and students.

The data suggest that while elements of the ideal school library instructional programme do exist in these schools, they are fragmented and as a result, students are not systematically exposed to essential skills and knowledge of the information world. It appears that in schools where staff turnover is low, it takes considerable time and effort to establish instructional and leadership programmes that balance reading, inquiry and technological learning needs of staff and students. An SLT with relatively new TL in a school with a high staff turnover is likely to make speedier progress where the school library programme is formally focused on coordinated activities and communication of information competencies across the school is assured.

Above all, these schools lacked tools for evaluating the connection between the educational activities of the SLT and student learning. Looking at their efforts in terms of seven dimensions of school librarianship has focused attention on a variety of potential tools and areas for further research. It has also identified points for focusing future initiatives that will effect change.

References

- American Association of School Librarians & Association for Educational Communications and Technology. (1998). *Information Power: Building Partnerships for Learning*. Chicago: American Library Association.
- Australian School Library Association & Australian Library and Information Association. (2001). *Learning for the future*. Carlton, Victoria: Curriculum Corporation
- Canadian School Library Association. (2001). The role of the teacher-librarian: a checklist for the future. *School libraries in Canada*, 21(2): insert.
- Chalmers, A. & Slyfield, H. (1993). *Contributions to Learning: Libraries and New Zealand Schools*. Wellington: Research Unit, National Library of New Zealand.
- Haycock, K. (1999.) *Foundations for effective school library media programs*. Englewood, Colorado: Libraries Unlimited.
- Henri, J. 1999 The information literate school community: Not just a pretty face. In J. Henri & K. Bonanno, (Eds.). *The information literacy school community: Best practice*. Wagga Wagga: Centre for Information Studies, Charles Sturt University.
- Henri, J., Boyd, S., & Eyre, G. 2002. Sculpting an information literacy school community: Looking for touchstones. In D. Singh, A. Foneska & B de Rosario (eds). *School Libraries for a knowledge society*. Proceedings of the 31st Annual Conference of the International Association of School Librarianship. Seattle: IASL pp121-140.
- Lance, K. C., (2000). *Information empowered: The school librarian as an agent of academic achievement in Alaska schools*. Anchorage: Alaska State Library.
- Lance, K. C., Welborn, L., and Hamilton-Pennell, C. (1993). *The impact of school library media centers on academic achievement*. Castle Rock, Colorado: Hi Willow Research and Publishing.
- Loertscher, D. (1988). *Taxonomies of the school library media program*. Englewood, Colorado: Libraries Unlimited.
- Ministry of Education and National Library of New Zealand. (2002). *The school library and learning in the information landscape: Guidelines for New Zealand Schools*. Wellington: Learning Media.
- OECD (2002). Knowledge and skills for life: first results from PISA 2000. Available at <http://www.oecd.org>
- Todd, R. (2002). *Evidence based practice II: Getting into the action*. SCAN 21(2):34.

Breaking Down Barriers: Teacher-Librarians as Partners in Internet Use in Canadian Schools

Dianne Oberg

Professor, Faculty of Education
University of Alberta
Canada

In Canada, as in many countries, teachers are being encouraged to integrate information and communication technologies (ICT) such as the Internet into the curriculum. A study conducted in Canada in 1999-2002 examined Internet use in schools through interviews with technology leaders, through surveys of teachers and principals, and through case study investigations of three school districts, each in a different province of Canada. The case study data from the three districts was analyzed, using the NVivo software program, to address three main questions: (1) To what extent was teachers' use of the Internet consistent with "best practice," as described by Moersch (1999)? (2) What types of support systems appeared to be essential for effective Internet use in classrooms to occur? (3) What was the role of the teacher-librarian in contributing to effective Internet use in classrooms? The study showed that teachers were integrating the Internet into their teaching, but had not yet achieved "best practice," and that teacher-librarians were influential in supporting teachers' progress towards "best practice" in the use of the Internet in instruction.

Background to the Study

In many countries around the world, teachers are being encouraged to integrate information and communication technologies (ICT) into the curriculum. My research partner, Dr. Susan Gibson, and I have been investigating the use of one aspect of ICT, the Internet, since 1997. Across Canada are many initiatives for Internet use in education, including a nationally funded organization called SchoolNet that has been involved in teacher professional development and a limited amount of research on Internet use in schools. Although there is no national office of education that might coordinate such initiatives in Canada, each of the provincial and territorial governments are involved in Internet use initiatives. In Alberta, one of the western provinces in Canada, for example, the ministry of education has funded Internet connectivity for schools, developed an integrated curriculum for technology use in schools and joined with other educational stakeholders to support an Internet training program for teachers, the TELUS Learning Connection.

In spite of these initiatives, a two-year study (1997-1999) in Alberta schools found that while teachers and principals were excited by the potential of the Internet, many were overwhelmed by its breadth and complexity (Gibson & Oberg, 1997). Teachers, even experienced Internet users, had little knowledge of the search engines and search strategies needed to make efficient use of Internet resources. Teachers and administrators felt that they were not getting adequate support from their school districts for learning about the Internet. Learning about the Internet appeared to involve highly individualized and isolated activities, taking place on the edges of the lives of teachers and administrators. The role of "technology specialist" was developing in some of the schools, often it appeared at the expense of the role of the teacher-librarian.

There also emerged questions related to "best practice" in the use of the Internet. The use of the Internet seemed to be increasing, but was it being used in ways that enhanced student learning? Researchers and theorists in technological change suggest that "best practice" in the use of the Internet would be characterized: by re-conceptualization of the Internet from an instructional tool to a learning tool, by movement from teacher-centered to student-centered learning, by classroom learning consistent with how students learn, and by focusing on real-world problems and process learning (Moersch, 1998).

Research Questions

The Alberta study raised questions for my research partner and me about the development of policies and practices related to technology infrastructure and teacher learning across the country. We obtained funding from the Social Sciences and Humanities Research Council of Canada for a three-year study of Internet use in Canadian schools. The study had a three-part focus: (1) an assessment of the overall national picture of Internet use in schools, (2) a Canada-wide survey of schools in the provinces and territories; and (3) case studies of Internet use in three school districts, each in a different province or territory.

This paper reports on one aspect of the third part of this study. In this part of the study, we were interested in exploring questions such as these:

1. To what extent was teachers' use of the Internet consistent with "best practice"?
2. What types of support systems appeared to be essential for effective Internet use in classrooms to occur?
3. What was the role of the teacher-librarian in contributing to effective Internet use in classrooms?

Research Methodology

The three-part study looked both at visions and policy and the realities of everyday practice in schools. To obtain an assessment of the overall national picture of Internet use in schools, with a focus on vision and policy, we interviewed representatives of the government departments responsible for educational planning and of the teachers' professional associations which represent teachers' interests and rights. To obtain an overall picture of what was happening in schools we surveyed principals and teachers using a mailed questionnaire. To gain a more detailed understanding of what was happening in schools across the country, we conducted case study investigations in three school districts in three very different parts of the country. The three school districts were chosen through an analysis of school based web sites as well as their involvement with Internet projects such as SchoolNet's GrassRoots program.

The three school districts were located across Canada: one in the Prairie Provinces, one in Central Canada, and one in the Atlantic Provinces. Teachers working with students in Grades 5, 8 and 11 were interviewed, and observations of the classrooms were undertaken. Additional interviews were conducted with members of the schools' administrative staff and with those providing technical support and/or leadership in the integration of the Internet in curriculum such as technology lead teachers and teacher-librarians. The intent of the case study investigations was to describe and analyze examples of best practice in Internet use in Grade 5, 8, and 11 classrooms.

We worked in and with each of the three districts over a two-year period. Along with a research assistant, we spent one week in each district on two separate occasions (Spring 2001 and Winter 2002). In between the two visits to each school district, we kept in contact with the participants by email. After each visit, participants were given opportunities to respond to the summary reports written by the researchers and to review the conclusions, implications, and recommendations generated by the researchers. The analysis of the case study data, including interview transcripts, field notes, and summary reports, was facilitated by the use of the qualitative software, NVivo.

Readers should be aware that the findings of this cannot be generalizable because of the small numbers of study participants and because of the qualitative nature of the case study research methodology used in this study. However, the study findings may resonate with some of the readers of this study. Readers should consider whether or not the situations described in the case studies are similar enough to their own situations in order to be able to apply the findings of this study to their situations. Readers should also consider whether explanations other than those proposed by the researcher and/or by the study participants might be possible and/or more credible.

Case Study Reports

The case study investigations explored the policies and processes schools and districts in three provinces have enacted in order to overcome some of the obstacles associated with Internet use as they attempt to integrate it into their curriculum. The case study data collection has been completed and summary reports have been approved by the research participants. In this section of the paper, I provide three case study reports in brief.

School District No. 1

Prairie School District, located in a small city, had developed a 3-year technology plan with the goal of advancing technology use in learning beyond traditional models of teaching centered on teacher instruction to incorporate teaching models focused on student learning including cooperative learning and guided inquiry approaches. A position had been established within the district's central office to coordinate and monitor technology growth in the school district. Teachers were provided with opportunities to learn to use technology as a tool through district office workshops, a district wide in-service and a yearly technology symposium. At the school level, to ensure sufficient instructional support, school-based technology support positions have also been established in addition to the teacher-librarian positions. The support teacher was expected to assist teachers in moving from entry-level skills of technology use in teaching to integrate technology outcomes with curricular outcomes.

The Grade 5 class involved in the study had access to several computers in the classroom as well as a computer lab. Computer access was provided in the same way for the Grade 8 and Grade 11 classes. The Grade 5 teacher planned one to two Internet projects a year that tied directly to curriculum themes and objectives. The teacher viewed the Internet as a resource that connected students to topics not accessible in traditional print mediums. For example, as part of a novel study, the students in Grade 5 followed the Iditirod Dog Sled race in the Northwest Territories. In the grade 8 class involved in the study, at the time of the visit, the students were working on a novel study. The Internet was used as a source of information to access other reviews and related material associated with the novel, and students were required to develop a web page that could include links to Internet websites about the book or author. At the grade 11 level, three teachers responsible for teaching social studies were included in the study. At the time of the visit, the grade 11 teachers were implementing a unit developed by one of them on the world wars. Although projects within the grade 11 classrooms generally used the Internet only as an information gathering tool, teachers encouraged higher level thinking through directed questioning techniques that required students to analyze, evaluate and synthesize the information presented in class with previous course content, information accessed on the Internet, and personal experience. Additionally, students were guided to differentiate between opinions and facts both during discussions and in the information obtained and sites visited when accessing material on the Internet.

School District No. 2

Central School District, encompassing a major city as well as the surrounding rural area, had not yet developed an overall technology plan. However, it did have a district policy on responsible use of the Internet, and technology learning outcomes were gradually being integrated into the subject area curriculum documents. Several positions had been established within the district's central office to coordinate and support technology growth in the school district. Teachers were provided with opportunities to learn to use technology as a tool through district office workshops, but increasingly teachers were asking for assistance with learning to integrate technology into the curriculum.

At the school level, computer contact teacher positions provided communication with district-level technicians and consultants. In addition, technology coaches who had been hired and trained by the district were working in classrooms with experienced teachers who wanted assistance with technology integration. There were teacher-librarian positions at the high school level, but not at the elementary and junior high school levels, due to severe budget reductions.

All of the classes involved in the study had access to computers in the classroom as well as computer labs. The Grade 5 class was using the Internet as a research tool, for example, to find information about slavery as part of a novel study and to access virtual tours to places such as the Louvre. The class also involved in a GrassRoots project on owls requiring the planning and construction of a website. The Grade 8 class had been involved in a GrassRoots projects on

water resources in the world. The students used the Internet to find information, making notes, and then producing a web page to present their information. The Grade 11 class was using an inquiry-based approach to studying ancient civilizations.

The teachers were supporting students in developing research skills such as choosing and vetting websites and presentation skills, both oral and PowerPoint presentations. Students were also encouraged to engage in reflection throughout the learning process. The new teacher-librarian at the high school was emphasizing resource-based learning by making teachers aware of some of the resources the library and of the Internet. The librarian had also provided support in locating websites for teachers and building the research skills of the Grade 11 students.

School District No. 3

Atlantic School District, encompassing both urban and rural areas, had developed an overall technology plan working in close collaboration with the ministry of education by the end of the second year of our study. The plan addressed technology in terms of equity, connectivity and professional development. The district's technology consultant worked with the ministry of education, supported the technology contact teachers in the schools, and coordinated technology planning within the district. Like Central School District, Atlantic School District had developed a program of technology coaches or mentors, hired and trained by the district, who worked in classrooms with experienced teachers who wanted assistance with technology integration.

There were teacher-librarian positions in all the schools in the district. The district had worked with the ministry of education to gain several additional support programs to provide more computers and more computer technicians in the schools. Teachers were provided with opportunities to learn to use technology as a tool through working with in-school technology mentors and teacher-librarians as well as through participating in district and ministry workshops.

The Grade 5 class was working on an integrated weather unit that involved cooperative planning between the two Grade 5 teachers and the teacher-librarian. The students, working in groups, rotated through "stations" or activity centers involving story writing, a novel study, science experiments, graphing, Internet research, model making and drawing isobar maps. Students used the Internet to access websites about weather to respond to various problems and to communicate with an author who had been to speak to the students as part of the story writing activity. The Grade 8 class was working on a collaborative project to create an on-line story for children in Grades 2 and 3; they mentored younger students on how to use the e-mail, create slide presentations and develop websites.

Other Grade 8 projects included a LEGO Mindstorm Robotics unit; a news broadcast to other schools using digital video editing and video conferencing, an online poetry unit, and a "Fathers of Confederation" WebQuest unit. The teachers designed the units but students were required to publish and share their work online. Students in Grade 11 had completed an Internet based research project for their computer class. Their chemistry and biology teacher used the Internet for visual resources for teaching; she has had her students create a chemistry tutor website and design a Corel presentation to explain a science phenomena. In one of several GrassRoots projects, the students investigated careers in science. The students interviewed people who were working in various science-related careers through e-mail, then organized and synthesized the information and posted it on the Internet.

Findings

Selected findings from the cross-case data analysis are presented here, in relation to differences in teachers' Internet use, differences in support systems for teachers' Internet use, and differences in the role of the teacher-librarian in contributing to teachers' Internet use in those schools and districts.

Teachers Internet Use

The analysis of teachers' use of the Internet in the Grade 5, 8, and 11 classrooms across the three case study districts was based on Moersch's Stages of Instructional Practice (1999) presented in Table 1. Most of the instructional practices observed in the case study classrooms would fit into Stage 2 of Moersch's model. In lessons where the Internet was being used, the content was organized around teacher-based questions and interests, but the students were actively engaged in problem-solving and/or investigative activities. The teachers were acting as facilitators and resource persons for the students as they used the Internet to find information from websites or from communication with experts. In a few classrooms, the Internet was being used to introduce the students to events and places they could not likely encounter in any other way (e.g., a virtual tour of the Louvre and daily news coverage of the Iditirod race). In a few of the classrooms, the teachers were assessing students' work using performance tasks and open-ended or problem-based questions. The most frequent observation of the elements characteristic of Stage 3 instructional practices classrooms occurred in classrooms in District 3. In these classrooms, the content was more likely to be organized around student questions (e.g., deciding what questions to ask an author or a scientist) and the topics for inquiry or problem-solving were more hands-on and closer to student interests and concerns (e.g., building robots, developing news broadcasts, helping each other to learn science content, and teaching younger children technology skills). The Internet was more frequently used in the classrooms observed in District 3 for communicating the results of student work to their peers and to the wider community.

Support Systems for Teachers Internet Use

The analysis of the types of support systems essential for effective Internet use in classrooms was based on the findings from several previous studies (Gibson & Oberg, 1997, 1998, 1999; Oberg & Gibson, 1998) in which teachers reported that school-based individualized approaches to learning about the Internet were more effective for them than were school, district or ministry sponsored workshops or in-services. The school-based approaches they reported as most frequently as being effective for supporting their learning were: trial-and-error, working with a colleague, working with students, and working with a designated staff technology specialist. In all of the case study districts, teachers had access to school, district and ministry sponsored workshops or in-services. For District 1 and 2, the ministry sponsored workshops and inservices were provided by ministry-sponsored arms-length professional development agencies, while in District 3, these were provided directly by ministry staff. In all of the case study districts, teachers had access to one or more designated staff technology specialists providing in-school support for keeping the computers and networks in working order as well as for helping teachers to learn about the Internet and about how to use it in their classrooms. The only major difference between the districts was the availability of teacher-librarians in the case study schools. Only in District 3 were there teacher-librarians in all of the case study schools. Although in the past there had been teacher-librarians in the schools of Districts 1 and 2, only the high school teacher-librarians remained and even in the high schools the teacher-librarian staffing level was much lower than it had been in the past (a reduction of more than 50% from a decade ago in one of the high schools).

Table 1. Stages of Instructional Practices			
Element	Stage 1	Stage 2	Stage 3
Content	Content organized and delivered by traditional scope and sequence; focus on teacher-based questions	Concept and processes organized and presented based on interests of teacher; learner, or both	Concepts and processes emerge based on learner's needs; focus on learner-based questions
Learning Materials	Organized by content; heavy reliance on sequential instructional materials	Emphasis on hand-on investigations and predefined problem-solving activities	Determined by problem areas understudy; extensive and diversified resources
Learning Activities	Traditional verbal activities; problem-solving activities (e.g., worksheets, story problems)	Emphasis on student's active role; problem-solving activities with little or no connection to broad concept or theme (e.g., verification lab from science kit)	Emphasis on student activism and investigation and resolution of issues; authentic hand-on inquiry related to problem under investigation focus on experimental learning
Teaching Strategies	Co-learner or facilitator or both	Expository approach	Facilitator resource
Evaluation	Traditional evaluation practices including multiple-choice, short-answers; and true-or-false questions; questions concept; use of portfolios	Uses multiple assessment strategies; including performance tasks and open-ended and problem-based open-ended questions; performance	Multiple assessment strategies integrated authentically throughout the unit and linked to problem or tasks, self-analysis and peer review
Technology	Drill-and-practice computer-based programs (e.g., integrated learning systems) and computer games; little connection between technology use and overall concept or topic searches	Technology integrated into isolated hands-on experiences (e.g., tabulating and graphing data to analyze a survey or experiment; information using the internet or a CD-ROM)	Expanded view of technology as process, product, and tool to find solutions to authentic problems communicate results and retrieve information (e.g., spreadsheets, graphs, probes, databases, CD-ROM-based simulations, Web-page development)

The Role of the Teacher-Librarian in Internet Use

Most studies of Internet use in schools have not addressed the role of the teacher-librarians, but in this study the district with teacher-librarians in all of its schools was further along in terms of “best practice” in the use of the Internet. This might suggest that the teacher-librarians may have had an influential role in the instructional practice of the classrooms. The three case study districts had similar support systems in place for teachers’ Internet use, except in terms of the availability of teacher-librarians. Several other factors that might have been influential were examined, such as the extent of involvement in GrassRoots project work, the number and quality of computers available in the districts, the role of the ministry in providing in-services to teachers, the provision of technical support to schools, and presence of technology plans. However, all the districts were involved in GrassRoots project work, all had provided some technical support to schools, and all had some form of technology plan in place. There were differences in the other two areas: access to computer power and the professional development role of the ministry of education. District 1 had a slight advantage over the other two districts in terms of the number and quality of computers available, but none of the districts had high-speed Internet access available in all schools and all were dealing with having many out-dated computers for which they lacked replacement funding. There appeared to be little difference in the nature of ministry-level in-services provided to teachers, but District 3 may have had the advantage here since its ministry provided in-services directly to teachers while the other two ministries had delegated this work to arms-length professional

development agencies. Finding no clear indication of alternate explanations for the differences in instructional practice, I turned to the words of the study participants to look for possible explanations for the differences among the case study districts in teacher-librarian staffing and then for any indications of what the teacher-librarian might bring to instructional practice in the use of the Internet.

Differences in teacher-librarian staffing.

District leaders explained the three districts' approaches to teacher-librarian staffing (and to library resources generally) in these ways:

District 1

When [teacher-librarian time] was mandated by the district and the staffing was put in place, everybody had the same allocation of teacher-librarian time proportionate to their student enrolment. When we turned to site-based management and those decisions were made at the school level, we've seen some schools who have maintained and maybe even expanded the amount of time allocated to a teacher-librarian. Others have cut right back and eliminated the position altogether, depending upon their unique circumstances. ... I'd say some of the most successful technology integration that I have seen is where the teacher-librarian is a technology lead teacher, and that makes some sense if you think about it, of course.

District 2

Our libraries, with the lack of funding, have fallen so far behind. ... We don't have teacher-librarians. ... We used to. We remember them fondly. ... At the elementary level, we have library technicians who do their best job to maintain the collection. That's all. [At the high school or junior high level], most of them have teacher-librarians or have a library technician, but that's even under attack now. Proposed in this budget was a cutback in technicians at the secondary level, and so their choice is either to cut their library technician, their guidance technician, or their computer technician. ... There's no funding provided for it [the ministry is actually targeting their funding on technology]. So it didn't flow out of the librarian piece; it flowed specifically because they developed the curriculum unit planner as a technology tool.

District 3

Even prior to the last five years where technology has become so much a part of the way things are done in schools, in this province, and this district in particular, we're really heavily committed to resource-based learning. And that's been a focus of the Department of Education; it's been a focus of schools as well. ... The teacher-librarians or resource librarians have been really a part of the planning curriculum in this district for at least the past eight to ten years, and I think technology just kind of has enhanced that role. Fortunately for us, most of our teacher-librarians are the people who have also embraced technology, and so they're not only using the resources in the library; they're using the library outside of the library, the online resources as well.

The teacher-librarians views of their roles in the use of the Internet.

Teacher-librarians in the three districts described their roles in these ways:

District 1

The district has made the decision [that at the high school level, teacher-librarians are going to provide the technology leader role] ... the role and the expectations of the teacher-librarian's position has changed over the years and has become much more technology focused than it certainly has been in the past. ... teachers come to me or tend to rely on me to provide instruction and assistance in technology-oriented issues ... [I am doing] much more specific kind of skill development and training the teachers, including things like assisting teachers to develop individual links pages, for instance, and assistance with other very specific technology-related instruction. The most recent one, just last week, was working with a teacher to provide a kind of mentorship in doing PowerPoint presentations. ... Now we tend to concentrate, it seems, not as much on the actual research process as more discrete skills and a wider variety of different types of skills, whether it's constructing a database [or] presentation skills, which are still part of the research process, but it's not a part of that whole strand of skills that you used to develop over a number of different lessons. (High school teacher librarian)

District 2

In terms of technology, I think one of my most important functions has been to make teachers aware of some of the resources that we do have in the library. We had subscriptions to ... online databases, and a number of teachers have commented after bringing their students into the library and seeing them using those tools how great they were. And, in fact, they're tools that have been available for a number of years, and people simply weren't aware of them I haven't had any role in [technology planning] other than canceling our subscription to Electric Library because the price was going up and we have no guarantee of budget next year ... I'm trying to, at this point, having been in the library for less than a year, I'm trying to watch for what teachers bring students in to do that might give me the opportunity to build research lessons that will complement what they're already doing. And that, I think, is part of the challenge in the library to see those opportunities to be constructive and not intrusive in what the teachers want to do anyhow. ... I think the most effective professional development comes when the teachers arrive with the students, wanting to do something, and in the course of pointing the students in the right direction, the teachers [learn the skill] ... Then the next time they do it themselves. (High school teacher-librarian)

District 3

I want to begin with my frustration of being a book stamper and reads-aloud [person]. ... I'm a teacher-librarian, so my goal was to change the traditional idea of the librarian, to change that to a teacher. So I scrounged around for different ideas of what to do with the classes, and I was able to persuade the principal to let me use the lab—we didn't have computers in the library, only the lab—to let me use the lab to work with teachers cooperatively to develop stations, learning stations and learning centers, using the Internet, as well as books. ... So there were the only two teachers that first year, and it was great! ... So then the following year I was able to encourage other teachers who saw what [the first two teachers] were doing, so word spreads, and I was able to convince them too, "This is a good thing. We're doing curriculum; we're doing classroom work, but yet it's out of the classroom. We're using the Internet." (Elementary teacher-librarian)

Others views of the teacher-librarians roles in the use of the Internet.

In the case study schools in District 1 and District 2, the role of the teacher-librarian in the use of the Internet was rarely mentioned. This was not surprising since two of the three schools in each of these districts had no teacher-librarian staffing.

District 1

In District 1, the library was mentioned as source of useful resources and as a place for students rather than for teachers. In the high school in District 1, the teacher-librarian was acknowledged as a leader in technology:

I think [my role as a principal in supporting the use of the Internet is] also very much encouraging it through [the teacher-librarian] in the library and the projects that he's been involved in over the years. I guess to my way of thinking ... that [my leadership means] getting out of the way of the individuals that want to do it, and so any time if a person has an idea and seems to have the motivation to try something, that we try and do whatever we can, and if it means providing a sub for them to go to something or to meet with somebody or to meet with other people on staff, providing coverage, we'll do that. (High school principal)

District 2

In District 2, the library was mentioned as a source of outdated resources and as a place for having an Internet connection. On occasion, the teacher-librarian was mentioned in terms of roles formerly carried out by teacher-librarians:

My job [as computer contact teacher] is just to sort of share [websites found by the district people] with everyone else [in the school]. I'm not necessarily the one that's going off and finding that information, whereas I think the teacher-librarians may have been in that role. (Junior high school teacher)

District 3

In District 3, the role of the teacher-librarian in instruction was mentioned frequently by district leaders, by principals, and by teachers. Here is a sample of their comments:

Our teacher-librarians or resource librarians have very much become a part of what teachers do on a daily basis. It's not unusual to go into any school and see the teacher-librarian sitting down at a grade-level meeting. If you have three Grade 3 teachers, you'll find the teacher-librarian sitting with them and talking about planning that particular theme or that particular section. (District leader)

The traditional library could get lost in this whole [technology] shuffle. That's why I'm really glad [the teacher-librarian]'s here, because she's very strong in the library part as well as the technology. ... with the resource center as being part of the cooperative venture in teaching, there's units of study, so we don't schedule in library classes any more. The classes are scheduled in according to where they are in units and so forth, so a Grade 2 or 3 class may be in there every day for two or three weeks, and then not be in there for a month, depending on what's going on. ... And there's our resource librarian, who is very comfortable and very capable and very approachable and is supporting, as ongoing support. So when [teachers] go through a unit [with technology] and it's successful, that encourages them to try something else. That's basically how we're moving. (Junior high principal)

If I was to get somebody to come in to do a session on [using the Internet] ... I would go through [the teacher-librarian] because she's the backbone of the Internet and the library services there. ... because I know there's lots of times if you say, "I'd like to have some information on this here," and it's usually up to her to find it, and you go check with [the teacher-librarian]. If she doesn't know where it is, she'll go find it. She'll have it for you within a short time. (Elementary teacher)

However, it is important to note that not all teacher-librarians in the schools in District 3 were involved in helping teachers to use technology. For example, at the high school, the library had the oldest computers, and the leadership in technology had been left to the computer teachers:

our librarian ... doesn't have as much access herself to the computers as the computer teachers do because we have actual specific courses. So it kind of goes through the people who are teaching computers. If you teach computers, you're free game for anyone who wants to know anything. So if you teach ITC ... they'll catch you as you're walking by, as you're getting your lunch, as you're going from class to class; or if you're going to a staff meeting, they'll ask there. It's catch as catch can. There's no real collaborative plan.

Discussion

The cross-case analysis of the case study data revealed some differences across the three districts in how teachers use the Internet, but in only a few classrooms did we see evidence of Moersch's Stage 3 Instructional practices, that is, the kind of practice described by this District 3 teacher:

Maybe I can talk more about my own sort of personal beliefs and my own sort of personal style. I would like to see my students sort of working collaboratively, I guess, and I'd like to just take on a role of facilitator, where I'm not talking to the class as a whole even. In fact, I probably quite rarely even did that, but where I've got the students working on different activities where they're finding information. I'm basically just sort of directing them, giving them, I guess, the teacher-as-facilitator role more than anything. But the students where they're sort of really motivated in what they're doing. ... I think it's not so much the topic, because you cover the same topic that you've done for years ... if it's sort of presented in a way that will motivate the students, and that's obviously one of the age-old challenges for a teacher to do. (Junior high teacher)

The cross-case analysis also revealed several differences in the nature of support systems provided to assist teachers in Internet use. In all three districts, support and direction at the level of infrastructure was evident in the coordinated efforts between school and district levels to attend to the technological needs of the district as a whole and for each school in particular. Unfortunately, a strong start in District 2 was being lost due to harsh budgetary reductions being made by the ministry of education; the lack of technology plans at both district and school levels in District 2 added to their struggles to attain an effective, coordinated, and successful implementation of the Internet and other technologies. With respect to instruction, in all three districts teachers were supported in learning how to use the Internet, how to integrate the Internet into curriculum, and in implementing technology outcomes.

Support included varied professional development opportunities at the district level as well as that provided at the school level by technology support teachers.

In general, where there were teacher-librarians, the Internet was being most frequently integrated into teaching and learning using collaborative and creative approaches. This was not the case in the high schools in the study, even though each had teacher-librarian staffing. This disappointing finding can be explained by a number of factors, two of which appear to be most important: (1) the high schools had very low levels of teacher-librarian staffing for the number and diversity of students, teachers, and programs and (2) the high schools saw the role of the teacher-librarian as either the traditional library role (planning resource-based learning programs collaboratively with teachers) or as the new technology leader role (providing professional development in technology skills for teachers), not as a combination of these roles. Although in one of the high schools, there was evidence of some students being involved in innovative and exciting learning using the Internet, this was restricted to small groups of students, primarily those involved in computer studies and science courses. There was not the collaborative, whole-school approach that appeared to be more the norm in the elementary and junior high schools with teacher-librarian staffing.

Research has identified a number of factors that appear to be crucial in enhancing teachers' Internet use: easy access to the technology needed to use the Internet; time for to learn the intricacies of the Internet; opportunities to engage in guided exploration of the Internet; opportunities for collegial sharing of integration strategies; access to one-on-one support from information and/or technology specialists; and support for teachers' learning about the use of the Internet provided by the school, the district, and the ministry of education. This case study provides evidence that teacher-librarians can be influential in enhancing teachers' Internet use, especially if they have appropriate time allocations for their work as teacher-librarians and if they and their schools are willing to expand their traditional library role to include and embrace the new technology leader role. This professional development and leadership role for teacher-librarians is one that is supported by many principals (see, for example, Henri, Hay & Oberg, 2002) and one that has been found to be correlated with improved student achievement (see, for example, Lance, Rodney & Hamilton-Pennell, 2000). The challenge for teacher-librarians is to take up and to work to enhance that leadership role and, for school library educators, to prepare teacher-librarians to do so.

References

- Gibson, S., & Oberg, D. (1997). Two studies of teacher learning about Internet use. *International Electronic Journal for Leadership in Learning*, 3(3). Retrieved from <http://www.acs.ucalgary.ca/~iejll>
- Gibson, S., & Oberg, D. (1998). Learning to use the Internet: A study of teaching and learning through collaborative research partnerships. *Alberta Journal of Educational Research*, 44(2), 239-241.
- Gibson, S., & Oberg, D. (1999). What's happening with Internet use in Alberta schools? *Alberta Journal of Educational Research*, 65(3), 239-252.
- Henri, J., Hay, L., & Oberg, D. (2002). An international study on principal influence and information services in schools: Synergy in themes and methods. *School Libraries Worldwide*, 8(1), 49-70.
- Lance, K. C., Rodney, M. J., & Hamilton-Pennell, C. (April, 2000). *How school librarians help kids achieve standards: The second Colorado study*. San Jose, CA: Hi Willow Research.
- Moersch, C. (1998). Enhancing students' thinking skills: Exploring model technology integration sites. *Learning and Leading with Technology*, 25(6), 50-53.
- Moersch, C. (1999). Assessing current technology use in the classroom: A key to efficient staff development and technology planning. *Learning and Leading with Technology*, 28(8), 40-49.
- Oberg, D., & Gibson, S. (1998). Teachers' concerns about the Internet: Implications for teacher librarians. *Scan*, 17(3), 48-53.

Biographical Note

Dr. Dianne Oberg is a Professor in teacher-librarianship in the Faculty of Education at the University of Alberta in Canada. Before coming to the University, Dianne worked as a classroom teacher and teacher-librarian in the public school system. Her research focuses on teacher-librarianship education and on the implementation and evaluation of school library programs. Dianne is the editor of the IASL journal, *School Libraries Worldwide*, and an active member of school library associations at local, national, and international levels.

Malin Utter

Librarian

Rönninge Gymnasium and Salem Public Library

Sweden

The paper is based on a Master's thesis that investigated how different organisations in Botswana inform people about AIDS. The thesis also addressed how some receivers of the AIDS information experience it. The study was conducted through interviews and observations. The findings revealed that the organisations and the information-receivers do not always have the same perception of the best ways to inform people about AIDS. Mass communication campaigns were most often used, but the young women studied preferred to be informed on a more personal level. A discussion about HIV/AIDS and school libraries follows.

Introduction

In Sub-Saharan Africa the prevalence of Acquired Immune Deficiency Syndrome (AIDS) is greater than anywhere in the world. One of ten people that have been infected with Human Immunodeficiency Virus (HIV) live in Sub-Saharan Africa, and 83% of the cases leading to death are found in the region, even though only 10% of the inhabitants of the world live in Africa south of the Sahara (United Nations, 1998).

Since there is no cure for AIDS, information, education and communication are still the only vaccine. The only way to stop the AIDS epidemic is to increase awareness about how infection occurs and then get people to change their behavior (Muganga, 1988).

The Study

AIDS is a problem particularly in larger cities. We therefore chose to limit our study to the capital of Botswana, Gaborone, which, with nearly 200,000 inhabitants, is the largest metropolis in the country. We also wanted to limit the target group to the category "young women", since these are an especially vulnerable group - a so-called "risk category" which requires extra information measures. We were aware that as a subject "young women" would not be a homogeneous group, but we did not know beforehand if we would have the possibility to refine our choices further (Andersson & Utter, 2002).

We intended to contrast a variety of different views among the organisations we planned to visit. We hoped to talk to church organisations, more general Non-Governmental Organisations (NGOs) and possibly also the Red Cross. We also wanted to visit schools and health clinics since these are important in the spread of AIDS information. We hoped to visit organisations of disparate character in order to see if they approach the problem in different ways and if they use different methods to spread information about AIDS. We also wanted to study a wider diversity of organisations as we expected they would reach young women in different environments and at different levels, which, we inferred, could be important in the way the information is received (Andersson & Utter, 2002).

Our purpose in this thesis was to how people and organisations in Botswana spread information about AIDS and to determine what some of the recipients think of the information (Andersson & Utter, 2002). We aimed to do this through talking to informants in different organisations, schools, and health clinics. We decided to talk to young women who were

recipients of the information. Our concern was to discover whether the most common ways of disseminating AIDS information used by organisations were also those which the young women appreciate most.

- Which ways of spreading information about AIDS do organisations use?
- What do the young women know about AIDS?
- In which ways do the young women want to be informed about AIDS?
- In which ways do the organisations think people want to be informed about AIDS?

Methodology

We chose the qualitative methods of interview and open observation because we wanted to investigate thoroughly how different people and organisations disseminate AIDS information and what they think is the best way to get messages out to the population. We did not want to draw any general conclusions; we wanted to describe a selection of different organisations and people who distribute information about AIDS. We also wanted to examine what the young women think about the information they get. The organizations we interviewed have been divided into four groups: church organizations, international organizations, national organizations, and youth organizations (Andersson & Utter, 2002).

The young women we interviewed were 13 to 17 years old. The selection of schools for our informant interviews was made by simply visiting the two schools in our neighbourhood. Our supervisor, Mrs. Jackson, also recommended that we visit the schools and was willing to contact the head teachers there, but we made the contacts ourselves. We were given assistance by the head teachers at the schools with the selection of the young women who took part in the interviews at the schools. We did, however, explain which age group we required. There was no possibility for us to control the actual selection of the young women (Andersson & Utter, 2002).

Previous Literature

Benedict N. Chin (1998), in her book *AIDS and AIDS Prevention in Africa*, thinks that the three most common ways in which people become infected by AIDS in Sub-Saharan Africa are heterosexual intercourse, transmission from mother to child, and blood transfusion.

According to Ann-Charlotte Ek (1999), in her book *Kenyan AIDS Discourses*, this is different from the case in Europe because sexual practices are different in Africa. In *Preventing and Mitigating AIDS in Sub-Saharan Africa* the editors, Barney Cohen and James Trussell (1996), write that the social, cultural, and economic factors that affect the size and form of the AIDS epidemic in Sub-Saharan Africa are

- the age and sex composition of the population,
- patterns of sex roles and expectations within the society,
- inequality between the sexes and power,
- the sexual availability of young girls and the acceptance of great age differences between sexual partners,
- rapid urbanisation with high unemployment,
- poverty,
- the great extent of sexual exchange caused by women's limited capacity to earn money themselves, and
- the lack of access to medical aid, especially for treatment of sexually transmitted diseases.

Carl-Johan Birkoff and Johan Körner (1994) write in *AIDS Education Through Drama* that studies carried out among married men in Africa show that not many bother to protect themselves. Many of the men said that they never used condoms. Another reason why the disease is spreading so rapidly in Africa is the mobility of the population, with broken family relations. Extra-marital relations are very common. These relations exist especially among migrant workers, men who work away from home (Birkoff & Körner, 1994). It is also common to exchange sex for money or material things. This is not always considered to be prostitution. Many women who live apart from their husbands or are legally divorced have sexual relations in return for money and things to supplement their low income and to support the family (Birkoff & Körner, 1994).

In *Aids i Afrika (AIDS in Africa)* Mai Palmberg (1993) writes that one important goal has been to try and change men's view of their sexual roles. The more wives or girlfriends a man has the higher status he will have; a woman is a part of his property (Palmberg, 1993). Benedict N. Chin (1998) writes that with that attitude women have seldom any say in sexual decisions. AIDS prevention programmes will not accomplish much without first dramatically reducing the inequality between the sexes. Chin (1998) mentions four different types of interventions:

- health education,
- counselling,
- peer education, and
- broadcast strategies (for example, the mass media, theatre, pamphlets, radio).

According to Gwen Lesedeti (1999), in her article, "HIV/AIDS and the status of women in Botswana," women are most affected because they constitute the majority of the poor and the poorly educated. More women of low economic status are being diagnosed with and are dying of AIDS. AIDS affects every aspect of women's lives whether they themselves or other members of their families are infected. Factors that put women at higher risk of infection include biological and social factors. Biologically, women are more vulnerable to HIV/AIDS than men because infection is much more concentrated in vaginal fluids. Women are at even greater risk because they tend to have sexual relationships with men who may have several partners and are more likely to be carriers of HIV/AIDS. The impact of HIV/AIDS on women is also more severe because of the multiple roles women play in the family as well as in society as a whole. They often combine the role of family care with that of breadwinner (Lesedeti, 1999).

Botswana is unusual in that girls are more literate and account for a higher proportion of primary school students than boys. There are gender imbalances at the secondary and higher levels of education. A significant number of females, however, drop out of school due to pregnancy, which prevents them from acquiring sufficient skills and training to qualify for better-paid jobs (Lesedeti, 1999).

Much of the inequality faced by women in Botswana can be attributed to traditional cultural values that still have a very strong influence on women's behaviour. In modern Botswana it is deemed acceptable for men to have more than one sexual partner. Men always dominate these relationships and women feel compelled to give in to their demands. In these relationships women have little power, for example, in determining whether condoms should be used. The cultural situation therefore makes women even more vulnerable to the risk of being infected by the HIV/AIDS virus (Lesedeti, 1999).

The high number of orphaned children is another consequence of HIV/AIDS, and will be an enormous burden on society with great social consequences. The estimated number of children who have lost their mother or both parents to AIDS while under the age of 15 since the beginning of the epidemic is 66,000. Botswana has traditionally had a very mobile population. People move between the home, village, the cattle post, and the lands (Morfeldt & Rubenson, 1999).

Considering the economic situation in the country, it is paradoxical that around 47% of the population live below the poverty line. This in itself is an important contributing factor to the rapid spread of the infection. If no radical change in economic policy is introduced this inequality will grow as a consequence of HIV/AIDS. The official figures on unemployment are also alarmingly high—an estimated 21%, especially among young people (Morfeldt & Rubenson, 1999).

There are various factors that can help explain the HIV/AIDS situation in Botswana and why the spread of the virus continues at such speed. The most complex and profound is the sociocultural structure, with high mobility, disintegrating family structures and a strong male influence over sexual behaviour (Morfeldt & Rubenson, 1994)).

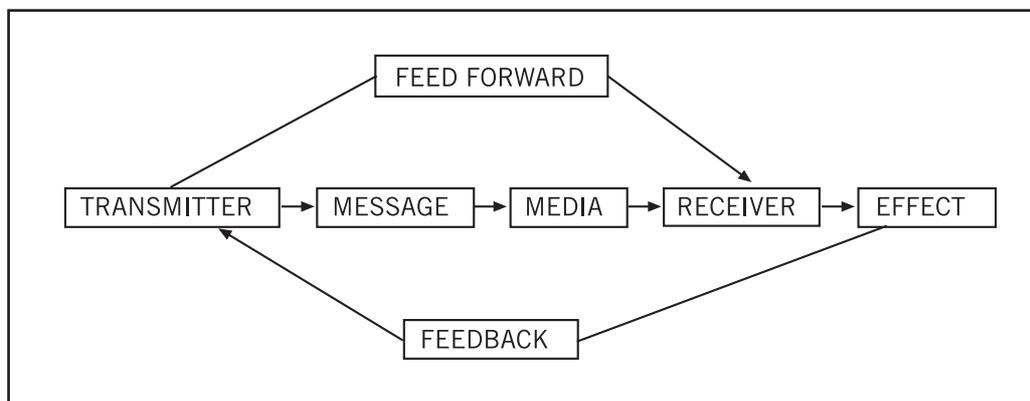
Theory

We based our study of two theories. The first, developed by Gunilla Jarlbro, concerns health communication. Jarlbro (1999) enumerates some things that an effective health campaign should include. Furthermore she says that interpersonal communication is more effective than mass communication in changing people's behaviour. In the analysis we scrutinise the different organisations that we have interviewed to see if they make use of the different ways Jarlbro mentions for disseminating information.

Jarlbro (1999) considers that community intervention is important in making health campaigns as effective as possible. This is especially important in countries like Botswana where there are many international organisations at work; if the organisations do not work together with the people in the society, the people may not listen to them.

Jarlbro (1999) recommends the use of "feed forward" so that sending organisations get a better picture of what the receivers already know and what they want to know. For feed forward to be effective, the organisations need to have a clear picture of who the receivers are and what special needs they have.

Figure 1.1. A model of the communication process (Jarlbro, 1999, p. 14)



According to Jarlbro (1999), when transmitters formulate messages, they have to take into consideration what the target group is. There are several different ways to spread information about HIV/AIDS. Jarlbro (1999) mentions some of them, and says that the transmitter's choice of medium depends on the target group.

The other theory, that of Ross Todd, deals with young women's information utilization concerning heroin. Todd (1999) gave information about drugs to selected girls three times and after each information opportunity he interviewed the girls and observed how their knowledge had changed. He found five different types of effects of the information provided. We are aware that it can be difficult for us to place the young women we interviewed in the different stages, because we have not done our interviews in the same manner as Todd.

In Todd's (1999) study, the young women liked visual media best. We will investigate what kinds of information the young women in our research have access to and which ways of getting information they prefer.

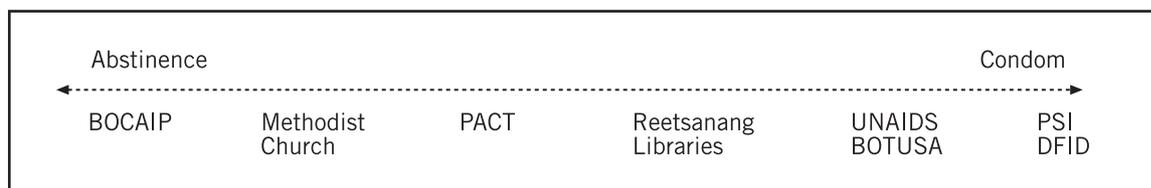
Through Todd's (1999) study we found a new way of looking at the form of dialogue between the user of information and the information professional. We will investigate the possibility of a dialogue between the organisations and the young women in our research.

Todd (1999) says that there are no guarantees that the adolescents approve of the information, even if others assume they do. We will investigate how the young women think the transmitter of the AIDS information should be.

Todd's (1999) study shows that the choice of information depends on where the adolescents are in their personnel and social experiences. We will investigate if the young women in our study get information that suits them through a sociocultural perspective.

Results

To show how the organisations and their messages about sex relate to one another, we have ranged the organisations on a spectrum according to the different messages they advocate. Those who advocate abstinence at the left end and those who advocate condom use at the right end:



The organisations we studied were of different types and had different messages to present about AIDS. There were some differences between the organisations in the different groups, and even within the groups. Some of the organisations (two church organisations) encourage abstinence. Others recommend both abstinence and the use of condoms, while one organisation advocates condom use only.

The organisations also made use of different ways of spreading information about HIV/AIDS: one organisation was a theatre group, others presented mostly oral information, others had both written and oral information, and still others made use of video. Several of the organisations thought that young people preferred to be informed by other young people and that young people preferred visual media, like those in Todd's study.

The young women we talked to had different levels of knowledge about AIDS. One of them had a very high level of knowledge and was active in a youth organisation that worked with AIDS information. The young women at the schools seemed to have less knowledge and they repeated several pat phrases repeatedly. Most of the young women preferred to have an adult talk with them about AIDS, but they also liked to talk about it with their friends. Some of the young women preferred oral information and being able to discuss HIV/AIDS, but one young woman thought theatre was a good way to inform young people about the disease.

Conclusion of the Thesis

Several of the organisations we talked to assumed that young people preferred receiving information from their peers, but the young women we interviewed preferred to be informed by an adult, for instance, in school by a teacher. The organisations also explained their interpretation of what young people consider the best way of getting information, but this did not agree with what the young women told us.

The messages the organisations presented varied among the organisations and even within the different types of organisations. Some organisations recommended abstinence only while one organisation advocated condom use only. Most of the organisations recommended both abstinence and the use of condoms.

Many different media were used to spread information: many presented information orally, and others used peer teaching, magazines, counselling, drama, posters etc. Several of the organisations used mass communication campaigns. The young women we interviewed preferred oral information, so that they could discuss it. Many writers in the professional literature have pointed out the importance of discussion. This was also shown by the fact that organisations like BOCAIP and Tebelopele made use of counselling in some form.

Another question is the relationship between the types of media used and the types of organisations disseminating information. The results indicate that the organisations that have had a little more money (i.e., the international

organisations) often spread their messages through written material. The national organisations, such as BOCAIP and Reetsanang, have to make use of oral information because of lack of money. PSI is sponsored from abroad and makes use of both written and oral information, but mostly written material. The young women, however, preferred oral and personal information rather than written information. Another advantage with oral information is that it can reach more people, even those who cannot read (the literacy in Botswana is about 70%).

The young women's knowledge about AIDS varied, but they all knew something. All had heard about AIDS. One major problem which we discovered was that one of the teachers did not think she had enough knowledge about AIDS to educate her pupils, and some of the young women we interviewed had not received correct information from their teacher.

We believe that more organisations have to make use of feed forward and evaluation in their work to suit the receivers' needs. Only two of the organisations we interviewed made use of feed forward, and only one made a close evaluation of its work.

Thus, in some ways the most common methods of spreading information about AIDS that organisations used were those most appreciated by the receivers, but in other ways the organisations did not know what kind of information the receivers wanted to have. Through the use of feed forward, and by making evaluations of their work, organisations can gain knowledge about the receivers of their information which will enable them to generate better and more effective communication with the receivers. As it is today, most of the organisations do not make use of feed forward. Information has to suit the needs of the receivers.

HIV/AIDS and School Libraries

Accordingly, the conclusion is that the information did not coincide with the young women's wishes. The right persons were not giving the information. The young women wanted adults to give them the information because they trust them more than their peers. In which way should this happen? Which institution may accomplish this?

There are two possible solutions. One of them is the teachers. The students trust them and they know how to inform students. Unfortunately the teachers have a lot to do and they do not have time to do that. The students have their focus on other subjects, and that too is a problem.

The other is school libraries. The students at Rönninge Gymnasium are between 16 and 19 years old. Most of the students visit the library every day, and some of them twice a day. In the library they use the computers a lot, they read magazines and books, and they are talking both with each other and with me. All the students are seeking information. The information is both for school work and for their other interests. The school library seems to be an eminent place to serve the students with information of different types, in this case HIV/ AIDS. Librarians can both inform the students orally and give them pamphlets and other written material. Further they may hand out posters and other information. Also the libraries may hand out condoms for free.

There are two advantages to these solutions: students spend time of their own free will in the library and there are adults (the librarians) with who they may talk. At the Gaborone Public Library there were a lot of students who sat there studying. The library has many books, many titles, and some simplified reads on the AIDS topic. Every local title that is published on HIV/AIDS is acquired. International texts and books that are of interest are also acquired. All libraries now buy many videos. In Botswana the public libraries do not buy their own books. They can select titles, but purchasing is centralised. The public libraries buy videos and posters. "Just by posters and books and videos people are being informed and empowered," the librarian said.

Every Wednesday at 16h30 a video is shown at the Gaborone Public Library about HIV/AIDS. Everybody who wants can come and watch. It is a pilot project which the library hopes will be passed on to all the other libraries. It has had the video for about a year and a half. It is shown to a "captive audience" in the reference room, but the staff also send notices about the video to all schools nearby and ask the schools to pass on the message to their staff and students. According to the librarian at the Botswana National Library Services it is mostly young people who come to see the

videos. They do not have many different videos or a large variety. They have four main videos and others that they borrow. Recently the department bought many new videos, but they have only just started going through them. Recently a video was produced locally in Botswana.

The librarian said that the information is mostly of general nature. But one of the four main videos that are shown is especially for young people—cartoons. That video is about an elephant and his friends. Elephants are supposed to be wise.

According to the librarian at the Botswana National Library Services the people who watch the video are often shocked. The librarian has had some people coming up to talk to her after the video.

The Botswana National Library Service arranges workshops for teachers. In most of their workshop programmes they put HIV/AIDS into the programme. Detta är ett sätt att för lärarna att få mer kunskap om HIV/AIDS. For this to be possible it requires school libraries or a library in the neighbourhood. Whether there are libraries at the schools vary around the world and even within countries. In Sweden there is a huge difference between different schools. In the Swedish library law school libraries are mentioned in some of the sections:

Section 5. Within the nine-year compulsory school and upper secondary school there should be suitably distributed school libraries in order to stimulate the interest of pupils in reading and literature and also to satisfy their needs for material in the education.

Section 7. The municipalities are responsible for the public and school library operations. The county councils are responsible for the county libraries and for the libraries at universities and university colleges whose principal is the county and municipal county councils. The state is responsible for other university libraries and university college libraries and for the lending centres and also for such library operations which the state is responsible for according to separate provisions.

Section 8. The public and school libraries shall afford particular attention to people with disabilities and to immigrants and other minorities by, among other things, offering literature in other languages than Swedish and in forms particularly adapted to the needs of these groups.

Section 9. Public and school libraries shall afford special attention to children and young persons by offering books, information technology and other media adapted to their needs in order to promote language development and stimulate reading. (Statens kulturråd)

Yet, there is nothing about there being a library at every school. It is ok with a library in the neighbourhood. Even if there is a library at the school, a librarian is not necessary.

At IASLs homepage it says that:

The school library functions as a vital instrument in the educational process, not as a separate entity isolated from the total school program but involved in the teaching and learning process. Its goals could be expressed through the following functions:

- Informational - to provide for reliable information, rapid access, retrieval and transfer of information; the school library should be part of regional and national information networks.
 - Educational - to provide continuous lifelong education through provision of the facilities and atmosphere for learning: guidance in location, selection and use of material and training in information skills, through integration with classroom teaching; promotion of intellectual freedom.
 - Cultural - to improve the quality of life through the presentation and support of the aesthetic experience, guidance in appreciation of arts, encouragement of creativity, and development of positive human relations.
- (International Association of School Librarianship)

In our school, with 350 students, we have a very good library. There is one part-time librarian and one teacher who works in the library six hours a week. The library is open the whole day Monday to Friday. The library is a place of information about education, events etc. The headmaster works in a positive way to serve the library and the budget is good. When it comes to HIV/AIDS we may be better placed to inform our students and it is the same at every library I have visited in Sweden. We have only a little information about other illnesses, even those more frequent in Sweden (e.g., clamydia), perhaps because many Swedes do not think they could be infected. This is something I will work against, because the library is a central agency for information.

In Botswana the Gaborone Public Library had good information, yet the school libraries have to develop. The youth are at the library every day and they should meet qualified personnel who can serve them with updated and easily accessible information about HIV/AIDS.

References

Andersson, Elna, & Utter, Malin (2002). *Be wise – Condomise : A study in Botswana on the spread of AIDS information and how the information is being received*. Borås, Sweden: Bibliotekshögskolan.

Birkoff, Carl-Johan, & Körner, Johan (1994). *AIDS educating through drama: An evaluation of the artists against AIDS campaign*. Uppsala, Sweden: ICH.

Chin, Benedict N. (1998). *AIDS and AIDS prevention in Africa*. Umeå, Sweden: Centre for Public Health.

Cohen, Barney, & Trussell, James (Eds.). (1996). *Preventing and mitigating AIDS in Sub-Saharan Africa*. Washington, DC: National Academy Press.

Ek, Ann-Charlotte (1999). *Kenianska aidsdiskurser : en studie av aidsinformation i Kenya och dess betydelse för kvinnors och mäns sexuella relationer i Luosamhället (Kenyan AIDS discourses)*. Umeå, Sweden: Institutionen för Medier och Kommunikation, Univ.

International Association of School Librarianship (IASL). Retrieved on March 3, 2002 from <http://www.iasl-slo.org>.

Jarlbro, Gunilla (1999). *Hälsokommunikation : en introduktion (Health Communication: An introduction)*. Lund, Sweden: Studentlitteratur.

Lesedeti, Gwen (1999). "HIV/AIDS and the status of women in Botswana." In Hope, Kempe Ronald (Ed.), *AIDS and development in Africa: A social science perspective* (pp. 47-57). New York: Haworth Press.

Morfeldt, Jan-Olof, & Rubenson, Birgitta (1999). *HIV/AIDS in Botswana: An assessment of the Swedish support 1998 and 1999 and recommendations for future support*. Stockholm, Sweden: Dept. for Democracy and Social Development, Health Division, Sida.

Muganga, Jonathan (1988). *Information, education and communication (IEC) on AIDS in Uganda*. Tampere.

Palmberg, Mai (Ed.). (1993). *Aids i Afrika (AIDS in Africa)*. Uppsala, Sweden: Nordiska Afrikainstitutet.

Statens kulturråd (The Swedish National Council for Cultural Affairs). Retrieved on March 3, 2002, from <http://www.kur.se/>.

Todd, Ross J. (1999). Utilization of heroin information by adolescent girls in Australia: A cognitive analysis. *Journal of the American Society for information Science* (January), 10-23.

United Nations. Office for the Co-ordination of Humanitarian Affairs (1998). *AIDS in Africa: IRIN Special Report 1998.12.1*. Retrieved on March 5, 2003 from http://www.sas.upenn.edu/African_Studies/Newsletters/irinw120198.html.

Biographical Note

Ms. Malin Utter, Master of Library and Information Science from Uppsala University, Sweden and university degree in history from Örebro University, Sweden, is a librarian at Rönninge Gymnasium (high school) and the Public library in Salem, Sweden. Rönninge Gymnasium serves a student population of about 350 students from 16 to 19 years old. She did her master thesis in Botswana during 2001 about HIV/AIDS and information.

Breaking Down Barriers Through the Creation of an International Digital Library for Children

**Ann Carlson Weeks, Allison Druin, Benjamin Bederson,
Juan Pablo Hourcade, Anne Rose, Allison Farber
Kara Reuter, Juhyun Lee, Mona Leigh Guha, and Yoshi Takayama**
Human-Computer Interaction Lab
University of Maryland, USA
and
Jane White, Jessica Anthony, and Brewster Kahle
The Internet Archive

A research project, begun in the fall of 2002, expects to tap the potential of the Internet for breaking down barriers and building tolerance and understanding through access to exemplary children's books from all over the world. The creation of the International Children's Digital Library (ICDL) is the focus of a five-year project being conducted by the University of Maryland/College Park and the Internet Archive with funding from the US National Science Foundation (NSF) and the Institute for Museum and Library Services (IMLS). This paper describes the project, discusses initial research findings and outlines the direction of ongoing research.

Introduction

Books can build links between people and bridges among cultures. Through books, young people can begin to understand who they are, explore the world around them, and learn to what it means to be literate in today's society. Research has shown that children's use of books can increase their cognitive, social, and motivational development (DeHirsch et al., 1966; Erikson, 1950; Meek, 1982). Access to narratives from different cultures can offer children opportunities to better understand the world around them as well as who they are in relation to that world. In an era of much uncertainty and conflict throughout the world, can there be a more important priority?

News media from around the world regularly report misunderstandings, intolerance and outright aggression among individuals and groups from different cultures. While research has shown that children absorb the ambiance, stereotypes and attitudes prevalent in their communities (Vendley, 1998; Wright, 1994), research also has found that if young people have opportunities to share personal experiences and "stories," attitudes may change (Jackson, 1983).

Unfortunately, the reality is that in most countries throughout the world, children rarely have access to books that reflect other than their own language and culture. In many communities, book collections in school and public libraries are small and may be significantly out of date. Limited and/or non-existent physical library facilities and inadequate financial resources offer almost insurmountable challenges for many librarians, parents, administrators, and teachers. Many children have limited access to reading materials of any type in their homes.

Books published in other countries can provide authentic accounts of the people, history, and traditions of other lands and help to counteract stereotypes and the often more sensation-prone information provided through television or other media (Salzman & D'Andrea, 2001). And yet, most libraries in the United States have inadequate foreign language collections. In 1995, the last time information was collected, librarians in fewer than 25% of schools nationwide rated their foreign language and/or English as a Second Language materials as excellent or adequate to support the curriculum (National Center for Educational Statistics, 1998).

Significant problems regarding access to libraries and books are reported by librarians and library administrators from throughout the world. In 1997, it was reported that fewer than 30% of the schools in South Africa had libraries, and yet it was common to see computers (Hart, 2000). In China, over 80% of the schools in large and medium-sized cities have established libraries in schools; however, in less developed areas of the vast country, fewer than 30% of the schools have libraries, yet approximately 50% have at least one computer (Xiaobin et al., 1996). Reports from librarians in Denmark, Russia, Kazakhstan, and the Netherlands indicate that libraries are important components in primary and secondary schools, and yet budget cuts have severely limited their abilities to provide the range of materials needed in today's global society. Most lack ready access to materials in a variety of languages (International Association of School Librarianship [IASL], 2002).

Policy makers, educators, and computer scientists suggest that technology may provide an alternative for breaking down barriers and making the world's literature available for all children. The promise of the Internet has been that no classroom, group or person should ever be isolated from the world's greatest knowledge resources. They envision a time when individuals anywhere and anytime can use the Internet to connect to a digital library to search all of human knowledge (President's Information Technology Advisory Committee [PITAC], 2001). If this technology is used knowledgeably and responsibly, it can connect resources and people from throughout the world in heretofore unimagined ways.

Unfortunately, until quite recently, when it comes to children, the promise of the Internet and digital libraries has fallen short. While there is an emerging and significant research field devoted to digital libraries and information retrieval, most content and interfaces are targeted at adults or older students. Few digital libraries have been developed that offer suitable content or interfaces for learners from 5 to 13 years old. To use these libraries, children must negotiate interfaces that require complex typing, proper spelling, reading skills, or necessitate an understanding of abstract concepts or content knowledge that are beyond their still-developing abilities (Druin et al., 2001; Moore & St. George, 1991; Solomon, 1993; Walter et al., 1996). And yet, access to a vast range of resources from cultures throughout the world through a digital library offers enormous promise for expanding the world of literature for children.

A new research project, begun in the fall of 2002, hopes to begin to tap the potential of the Internet for breaking down barriers and building tolerance and understanding through access to exemplary children's books from all over the world.

Creating a Digital Library for Children

The creation of the International Children's Digital Library (ICDL) is the focus of a five-year research project being conducted by the University of Maryland at College Park (UMD), a leader in human/computer interaction research, and the Internet Archive, a non-profit foundation committed to creating a comprehensive archive of the Internet. The project, funded by the U.S. National Science Foundation (NSF) and the Institute for Museum and Library Services (IMLS), has as its primary goals:

- the creation of a digital library of at least 10,000 children's books in at least 100 languages that is freely available over the Internet,
- the development of a icon-based interface that enables children to search, browse, read and share books in a digital format; and
- an investigation of how access to this digital library can inform the creation of technology for children, improve library practices, and influence children's attitudes toward books, reading, technology, libraries, and the world around them.

A prototype for the Digital Library (www.icdlbooks.org) was launched on November 20, 2002. The initial collection included 181 books from 27 countries (including Egypt, Croatia, Singapore, South Africa, Australia, New Zealand, and the United States) in 18 languages. This paper discusses the partnerships that have been established and the unique design methods that are being used to create the digital library for children. It also summarizes the lessons the team

has learned during the first three months of the Library's deployment over the Internet and changes that have resulted from these discoveries. It describes the ongoing questions that the project is addressing and the suggested ways that the project can help to build bridges among people.

The research team includes librarians, computer scientists, educational researchers, visual artists, information scientists, children (ages 7 to 11) and classroom teachers. To work together, the team uses a combination of techniques known as "Cooperative Inquiry" (Druin, 1999; Druin, 2002). These techniques offer an approach to research that can be used to gather data, develop prototypes, and forge new research directions. With these techniques the team has begun to address questions such as

- How do children of varying ages (3 to 13) choose books?
- What kinds of online tools can best support children in their use of digital materials?
- How can librarians, teachers, authors, publishers, illustrators, and scholars from all over the world cooperative to create an international digital library?
- How can this digital library be used in school and public libraries throughout the world?

The goal of this research is to give diverse people a voice in the technology design process to make digital libraries more appropriate for children's needs and to make this digital library accessible to learning communities throughout the world.

Digital Libraries of Children s Materials

There are few large-scale collections of digitized children's books to explore. In March, 2003 the largest collection of full-text digital books for children numbered fewer than 400 titles, which were published between 1850 and 1870. This collection of children's literature is being created at the Digital Library Center at the University of Florida (<http://palm.fcla.edu/juv/>). At the core of this collection are books from the Baldwin Library of Historical Children's Literature, housed in the Department of Special Collections and Area Studies at the University of Florida. Additional titles will be added from the Departments of Special Collections at the Florida Atlantic University, Florida State University, and the University of South Florida. The foundation for this collection was a cataloging and preservation microfilming project funded by the National Endowment for the Humanities (NEH).

Other sites that include collections of public domain titles include "Children's Books Online for Free" (<http://www.editec.net>), which includes fewer than 100 fully digitized books online, with plans to increase the number to 2,000 titles, and the University of Virginia's Electronic Text Center (<http://etext.lib.virginia.edu/ebooks/>), which includes approximately 200 books identified for young readers.

Most sites show only titles, sometimes with summaries, reviews or associated activities (e.g., <http://www.bookadventure.com>, <http://www.bookchilde.org>, <http://fusion.sims.berkeley.edu/ReadingTree>, <http://www.twbookmark.com/children>). Other sites offer only options to purchase books (e.g., <http://www.ebooks.com>, <http://www.ipicturebooks.com>, <http://www.tundrabooks.com>). Few of the sites provide books in any language other than English.

An examination clearly shows that most sites were not designed primarily for use by children. The interfaces rely on keyword searching and/or "point-and-click" lists that necessitate typing or reading long lists of titles. Some interfaces offer a combination of book cover images with titles, but then offer limited methods for reading the actual book pages. The industry standard for book readers, *Microsoft Reader and Adobe Acrobat eBook Reader*, were designed primarily for adults reading long books or documents consisting mostly of text (Hourcade et al., In Press).

Creating the Visual Interface

Between 1999-2002, a research team at the University of Maryland's Human-Computer Interaction Lab (HCIL) developed and tested a visual interface that supports young children ages seven to nine in querying, browsing, and organizing multimedia information. This initial project had multimedia resources focused on animal information donated by the Discovery Channel and the Patuxent Wildlife Research Center. It was used by children at Yorktown Elementary School in Bowie, Maryland to test and refine the interface.

Building on this research foundation and generalizing to a broader library collection and audience of children, the research team created a prototype for browsing, searching, and reading books electronically that was initially tested in August 2002. An interdisciplinary team of researchers from computer science, information studies, education, art, and psychology are working with children ages 7 to 11 to design this new library. Children's ideas are heard throughout the entire technology design process. To make this a reality, children work in the labs as researchers twice a week during the school year, and two intensive weeks over the summer. Together, this interdisciplinary and intergenerational team brainstorms, sets project directions, tests new ideas, and implements technologies (Druin et. al., 2001).

Collection Development

In addition to this partnership for interface development, the ICDL has also established partnerships for collection development with national libraries, public library systems, professional associations, commercial publishers, authors, illustrators, and school districts around the world. The Internet Archive, a non-profit organization focused on digital collection development, has been leading this effort for the project. Collection guidelines are being jointly created, materials identified and digitized, and fair use models are being explored. Approximately one half of the books in the initial prototype collection are within copyright. In some cases, the books were contributed with specific restrictions. Some publishers or authors agreed to donate their materials only if they were encrypted for book viewing using the Adobe eBook Reader. Others set limits upon the length of time that the books could remain in the collection. All are interested in understanding the market potential for such a delivery mechanism.

The materials included in the collection reflect similarities and differences in cultures, societies, interests, lifestyles, aspirations, and priorities of peoples around the world. The collection's focus is on identifying materials that help children to understand the world around them and the global society in which they live. It is hoped that through a greater understanding of one another that tolerance and acceptance can be achieved.

The collection has two primary audiences. The first audience is children ages 3 to 13, as well as librarians, teachers, parents, and caregivers, who work with children of these ages. The second audience is international scholars and researchers in the area of children's literature.

It is anticipated that all works included in the collection will be presented in their entirety and will not be adapted or abridged from their original published form; however, works originally published as abridgements or adaptations of other works may be included in the collection. Materials included in the collection may be

- currently available in print and within copyright,
- out of print but within the copyright protection of the country in which they were published, or
- freely available in the public domain.

Materials within the collection are available over the Internet to all users without charge. During the period of the research study, it is anticipated that approximately 40% of the collection will be made up of important historical materials that are in the public domain and approximately 60% of the collection will be contemporary materials that are in copyright. During the process of creating the collection, the ratio between historical and contemporary books will vary based upon the availability of materials. Historically important literature and contemporary award-winning titles will be added to the collection as they become available.

In addition to the collection of published materials, the ICDL may also include information that extends the understanding of the materials such as biographical information about authors or illustrators, reviews or annotations of works by users of the ICDL or others, activities to support use of the materials by children or others, and/or translations of materials to expand use by children. The primary function of the collection is to serve as the basis for ongoing research concerning the development of computer interfaces for children and the use of digital materials by children and librarians.

The ICDL Architecture

The initial ICDL software was written in Java and relies upon Sun's freely available Java 2 platform, currently available for Windows, Solaris, Linux and Mac OS. It is built using the *Jazz Toolkit for Zoomable User Interfaces* (Bederson et al., 2001). The software is deployed with Java Web Start technology that enables a user to download, install, and launch the software with a single click on a web page link after the Java software is installed. The ICDL software may then be launched either from the project's web page, or a desktop icon. Most books are stored unencrypted on a Web server in jpeg format and accessed directly through the Java client software. However, some books are encrypted according to publishers' requests and are served with *Adobe Content Server*. The encrypted books are accessed through the ICDL's visual search system, but are read with the freely available commercial *Adobe eBook Reader application*.

There are two ways to search for books. One can search by geography by spinning the globe and selecting a region (e.g., Africa, Europe, Asia, etc.). From this process, the search results provide a subset of the collection that is about the region, set in the region, or written by an author from the region.

A richer way to find books is through the visual search interface. The search categories were chosen based on research with children and librarians concerning how children want to look for books. The categories represented by the icons currently include:

- the subject of the book,
- the types of characters in the book,
- the language in which the book was written,
- "true" or "make-believe" books,
- how well it is rated by other children,
- how it makes children feel (e.g., "I want to find a book that makes me happy"),
- the shape of the book,
- the length of the book, and
- the primary color of the book's cover.

Clicking on one of these icons zooms in to reveal the possible attributes in that category, also represented by icons. Clicking on an attribute initiates a search on that attribute. The icon is smoothly moved to the "search caterpillar," which represents the current search. If multiple attributes are chosen, those attributes are ANDed. The search results are presented visually through book covers in the search result area.

Clicking on the search results brings the child to that area where they can then use a *Zoomable User Interface* to visually explore those results. The search results are shown using an embedded version of *PhotoMesa* (Bederson, 2001). *PhotoMesa* presents groups of images in rectangles that can then be examined more closely. Clicking on a group zooms into the group, and clicking again zooms in further to individual books.

Clicking on a single book brings up the "book preview" page, which includes metadata about the book, including title, author, date, language, publisher, contributor, page count and summary. From there, the book can be read with one of the four book readers.

A second interface, which will require less robust computer requirements, will be introduced in the summer of 2003. This interface will be HTML-based and will allow browsing and searching through both the “regions of the world” and the category-based approaches. It was found during the initial launch of the ICDL software that many users throughout the world had difficulty accessing the library because of the high technology requirements and the need for a fast Internet connection. Because of the enormous interest in gaining access to a collection of international children’s materials that was expressed by teachers, librarians, parents, and scholars throughout the world, the research team began exploring alternatives. It is anticipated that the research team will develop, test, and improve both versions of the software throughout the duration of the study.

Book Readers

There are currently three book readers that were developed by the team at the University, and the *Adobe eBook Reader* for books that were required by the contributor to be encrypted. Children may use the reader with which they are most comfortable (except for encrypted books that currently require *Adobe eBook Reader*). The traditional reader is most similar to traditional commercial readers. It shows one page at a time with simple forward and backward navigation buttons. Users can specify the orientation of the controls (horizontal or vertical) and whether the pages are shown one at a time, or in a two-page spread. All pages are deployed with a 1024x768 jpeg image, but when zoomed in (with the magnifying glass icon), an image twice that resolution is downloaded in the background.

The “comic strip” book reader presents a zoomed out view of the visual book pages – oriented in horizontal strips like a comic strip. To read sequentially, a user simply presses the right arrow (or page down key). The interface smoothly zooms into the first page, and then animates to the next page in order upon subsequent arrow presses. At any time, the user may press the “zoom out” button to return to the starting overview page, and then click on any page to go directly to it, no matter what the page order of the book. The page borders are colored to indicate whether a page has been visited or not. The goal of this reader is to support simple overviews without getting in the way of traditional linear access. The HTML-version of the interface uses this reader.

The third option, the “spiral” reader, is more dynamic. Its goal is to provide an experience like flipping through the pages of the book to quickly examine the book’s content. It presents the pages of the book in linear order with a “focus” that is larger than the other pages, and a tail that shrinks. Like the comic strip reader, simple linear access is provided by the arrow buttons at which point the focus page is smoothly zoomed up to fill the screen. Going to the next page simultaneously shrinks the focus page down, rotates the spiral to focus the next page, and zooms up that next page. At any point, the zoom out button can be pressed to shrink the focus page, and then the user can click on any page in the spiral to spin the spiral so that page comes to the focus spot.

Initial Lessons Learned

As noted above, the prototype for the library was launched on the web in November 2002. In an attempt to understand how the library was being used initially by the general web public, the research team analyzed log data. The results of this initial analysis are briefly presented here along with a discussion about what this information may mean regarding future web deployment of the digital library.

Results

During the first three months of public use, log data were collected that suggested who was accessing the software, what search methods were used, and what books were accessed. For a shorter period of time, log data were collected on the use of the book reader interfaces. Based on the web logs and feedback that the team received by email, it is clear that there was broad use of the library by people from around the world including librarians, teachers, children, parents and others.

The log analysis was performed using the commercial Sawmill log analysis product (www.sawmill.net). In this discussion, the term “visitor” means one who gained access to the project’s website from a unique IP address over the period of the analysis and “page view” means a specific web page accessed by any client. Each “session” is defined to mean access from a unique IP address with no inactive period greater than 30 minutes. All numbers are rounded.

Over the first three months of use, over 100,000 users accessed the general web site. Of those visitors, approximately 89,000 entered the library page that would give them access to the Java application deployed through Java Web Start, which would enable them to run the library. More than 20,000 were able to successfully download the actual Java application file and run the ICDL software.

The majority of the users were from United States, followed by Canada and Taiwan. Aggregated by continent, the users were from:

North America:	67%
Europe:	17%
Asia:	12%
Oceania:	2%
South America:	1%
Africa:	Less than 1%

More than three-quarters of the users (79%) looked for books using the visual search (category) interface, while 21% used the globe interface. Sixty-eight percent of category searches were on a single category with thirty-two on two or more categories. The top five single category searches were:

- Books for three to five year olds
- Books in English
- Books for six to nine year olds
- Books about imaginary beasts and creatures
- Books rated with five stars

The most frequent search categories in the digital library were not remarkably different from searches for books in physical libraries. Visitors looked for books by:

Age (books for three to five year olds, etc.)	18%
Subject of the book	17%
Language in which the book was written	13%
Type of book (genre)	10%
Characters	9%
Setting	8%
Color of the book cover	7%
How the book was rated by children	4%
How the book made children feel	3%

For the users who searched by geographic area with the globe interface, they searched for books by continent as follows:

North America:	29%
Asia:	24%
Europe:	23%
South America:	10%
Oceania:	8%
Africa:	6%

During the initial three month period, 36,000 total books were accessed (not including books that were read multiple times once they were downloaded since it was not possible to track this information.) The most popular book was *Axel the Freeway Cat* (Hurd, 1981). The popularity of this title may have been due to the fact that it was mentioned in numerous articles that appeared in press coverage of the ICDL launch. The next most popular books were (a) *Sun Flight* (McDermott, 1980), an in-copyright book contributed to the collection by Caldecott-Award winning author, (b) Brueghel's *Where's the Bear?*, a simple story in multiple languages donated by the Getty Trust Publications; and (c) *Going Downtown and other Rhymes* (Choo, 1996), a book about life in Singapore, contributed by the National Library of Singapore.

As for the books that were requested by publishers to be encrypted, the total number of books accessed was 1075 (again, not including locally cached accesses). The most popular book accessed through the *Adobe eBook Reader* was *How Do Dinosaurs Say Good Night?* (Yolen, 2000) followed by *Is Your Mama a Llama?* (Guarino, 1989) and *When Sophie Gets Angry-Really, Really Angry* (Bang, 1999). All of these books were contributed to the ICDL by Scholastic, Inc. The total number of books accessed through the Adobe Book Reader was considerably less (19%) than those accessed through the other three readers.

During a three week analysis of the other book readers, it was determined that the Standard Book Reader was used 69% of the time, the Comic Book Reader was used 16%, and the Spiral Book Reader was used 15%. Using these readers, more than 650,000 pages were accessed by all users. On average, each visitor looked at 1.5 books, and this number stayed relatively constant throughout the period. Most visitors viewed only one book, but many people viewed multiple books and more than 100 visitors read ten or more books.

Discussion

Based on the initial analysis of use during the first three months, it became obvious that an application with high-end technical requirements can serve only a small percentage of users on the web. Only 20% of visitors to the ICDL during the initial period were able to run the library software successfully. It was assumed that this number was so low because of the high system requirements needed to run the application (e.g., a fast Internet connection, 250 mg of memory, and Java and Java Web Start installed). In response to the outpouring of email requests asking for access to the site with lower system requirements, the research team began to develop an HTML-only interface. The interface is in the initial testing stages and is expected to be deployed by Summer 2003. The team will compare usage patterns between the Java interactive version of the interface and the more static HTML version to determine how much, if anything, is "lost" to the user without the smooth animation and zooming.

The initial analysis indicates that most users of the ICDL were from North America or from primarily English-speaking countries. This finding is not surprising because the interface, though quite visual, includes text that currently is only in English. In addition, most initial media coverage about the project came out in the American press. As noted above, it is assumed that the high-end system requirements may be a barrier to use in many other countries. Therefore, one area of the research will focus on whether the make-up of users will change when the html-only interface is deployed and when there is explicit support for other languages.

During the initial analysis, most users searched by "standard" metadata categories. Based upon the preponderance of searches by "age" and by "subject," it is believed that most users were adults or adults working with children. When children in the University's lab and on-site in schools and libraries were observed, most seemed to search using the more novel categories. On-site testing of how children search (without adult suggestion) began in late March. The data collected will be compared to public access logs of the website to see if there are differences and to attempt to determine who and how the ICDL is being used. In examining the data on book readers, it was found that the more novel book readers (e.g., the comic strip book reader and the spiral reader) were accessed almost an equal number of times. This finding perhaps suggests that there is no clear favorite interface between the two options - a finding confirmed in earlier pilot studies in the lab with children (Hourcade et al., In Press). While the standard book reader was accessed more than the other readers, this seeming preference may be due to the fact that it is the default book reader. In future research, the default settings will be varied among the book readers to see if usage patterns change significantly.

In examining the books that were accessed most frequently, it was not surprising to find that contemporary books were the most popular. However, it also was determined that *Where's the Bear?*, the book that had text in five languages on each page, also was quite popular. A book of poetry, contributed by the National Library of Singapore, was particularly popular. These findings support the importance of a continuing commitment to identify bilingual and multilingual titles to include in the collection as well as to continue the emphasis on collecting books in as many languages as possible.

One of the primary reasons for conducting this research was to identify and test a means of expanding access to children's books in multiple languages. In the initial research, it appears that this project is responding to this need. What will be an area of continuing study is to determine how these materials may be used effectively with children to increase their understanding of similarities and differences among peoples and cultures.

In the initial study, it was not possible to determine (a) how many of the users were children and how many were adults; (b) how many children visited the library independently and how many visited with parents, teachers, librarians, or other adults; (c) how many users were teachers, librarians, or researchers; or (d) why the users visited the library. Therefore, an empirical study currently is underway to see how pairs of children in school and public libraries use the ICDL. In addition, a voluntary web-based questionnaire is being developed that may provide the team with a better understanding of who the users are and what their needs may be for the future. The team will continue to use web logs to track the general public's use of the ICDL to gain a better understanding of the use patterns over time.

While it has only been a short time since the initial deployment of the ICDL, the public's use of this demonstration system has provided a great deal of information that will help to focus future development. While the interface had been tested extensively before deployment, the biggest challenges turned out to be related other issues.

Conclusions

Balance Innovation with Public Access

The enormous drop-off in users who were unable to download the Java *Web Start* application, made a profound impression on the research team. Many emails from frustrated users felt it was "shameful," "unfair to children," and "not supportive of schools and libraries" that such high-end system requirements would be needed to have access to children's books. At the same time, other email messages from many "excited" users expressed delight with the "interface innovations" and the relatively "bug-free experience". The team had discussed the issue of the "high end" technology requirements before the initial release. On the one hand, project funders and partners expected far-reaching research, yet concerns were expressed that potential users might become frustrated. There was particular concern that this international collection would have limited accessibility beyond North America if the technology requirements were too high, a result that the team definitely wanted to avoid.

The outpouring of reaction, both the positive regarding the importance of the project and the negative reflecting frustration because of lack of access from the users from throughout the world, resulted in the team's decision to commit significant resources to creating an interface that could be used more widely by the beginning of Summer 2003. Both the Java and the HTML-versions of the software will be accessible to visitors to the Library.

Speed Matters

The team was aware that speed is an important factor in the development of any interface; however, the initial phase of this research underlined just how critical it is in web deployment. Users are somewhat forgiving when a static web page takes several seconds to load. If that same slow speed is evident in an interactive Java application, however, people simply have no patience. If the users are children, the impatience is even more pronounced. As noted above, the findings in the initial research demonstrated how critical it is that the team employ a dual development strategy that supports access to the collection of children's materials and allows continuing interface innovation.

There Is Interest in Various Countries and Languages

Users throughout the world are interested in children's books from many cultures and in many languages. Other than *Axel, the Freeway Cat*, the books that were most frequently accessed were *Sun Flight*, *Where's the Bear*, and *Going Downtown and Other Rhymes*. Each of these books offers a look into other cultures, and in the instance of *Where's the Bear?*, into other languages. This finding confirms that there is great promise in pursuing the development of an international collection of children's books in multiple languages.

Web Logs Can Say Only So Much

While the analysis of web logs offered a good first understanding of users' activities with the ICDL, much more information is needed. In particular, it is important to know more about who is really using the computer. Before the initial release, team wrestled with the question of how much information could be collected from users. This concern was particularly important because the site is designed to be used by children. It is hoped that the combination of onsite empirical studies, voluntary web-based visitor questionnaires, and web logs will provide data to support the research progress.

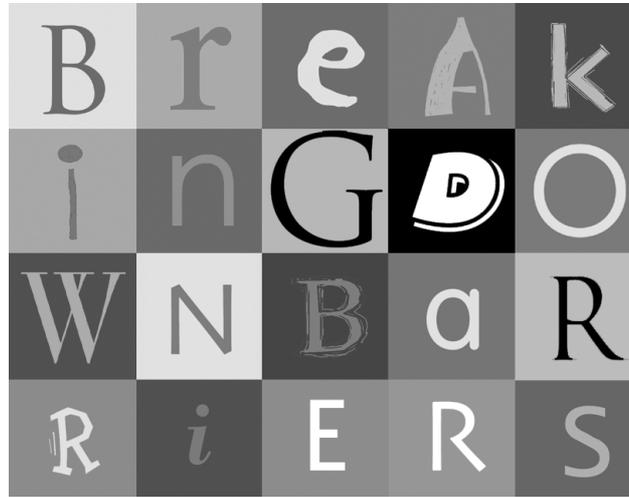
Future Work

A version of the interface for the library that does not require Java *Web Start* nor a high-speed Internet connection is in its initial testing phase. The research team has tentatively decided that this simpler, less technologically demanding version may serve as the default interface for the library, although the Java-based (enhanced) version will be available to all visitors. Based on the initial insights gained from the early analysis, it is clear that there is a need for testing and comparing both versions of the ICDL with various empirical methods. The research team members also have come to understand the critical need to balance research priorities with a responsibility for serving the public's interests. It has been made very clear by the visitors to the Digital Library that there is an enormous interest and a pressing need for a collection of children's materials in multiple languages from all over the world that is freely available over the Internet. As the research continues, balancing these two foci may be the biggest challenge facing the research team.

References

- Bang, M. (1999). *When Sophie gets angry-really, really angry*. New York: The Blue Sky Press.
- Bederson, B. B. (2001). PhotoMesa: A zoomable image browser using quantum treemaps and bubblemaps. *UIST 2001, ACM Symposium on User Interface Software and Technology, CHI Letters*, 3(2), 71-80.
- Bederson, B. B., Meyer, J., & Good, L. (2000). Jazz: an extensible zoomable user interface graphics toolkit in Java. *UIST 2000, ACM Symposium on User Interface Software and Technology, CHI Letters*, 2(2), 171-180.
- Brueghel, J. (1997). *Where's the Bear?* London: Oxford University Press.
- Choo, K. K. (1996). *Going downtown and other rhymes*. Singapore: NTUC Childcare Cooperative Ltd.
- DeHirsch, K., Jansky, J.J., & Langford, W.J. (1966). *Predicting reading failure*. New York: Harper & Row.
- Druin, A. (1999). Cooperative inquiry: Developing new technologies for children with children. *Proceedings of ACM CHI 99 Conference on Human Factors in Computing Systems*, 223-230.
- Druin, A. (2002) The role of children in the design of new technology. *Behaviour and Information Technology* (21)1, 1-25.
- Druin, A., Bederson, B. B., Hourcade, J. P., Sherman, L., Revelle, G., Platner, M., & Weng, S. (2001). Designing a digital library for young children: an intergenerational partnership. *In Proceedings of Joint Conference on Digital Libraries*, ACM Press, 398-405.

- Erikson, E.H. (1950). *Childhood and society*. New York: Norton.
- Guarino, D. (1989). *Is your mama a llama?* New York: Scholastic, Inc.
- Hart, G. (2000). School libraries in South Africa: past, present- and future? Retrieved from <http://home.imagnet.co.za/liasa/schoolreports.htm>.
- Hourcade, J. P., Bederson, B. B., Druin, A., Rose, A., Farber, A., & Takayama, Y. (In Press). The international children's digital library: viewing digital books online. *Interacting With Computers*.
- Hurd, T. (1981). *Axel, the freeway cat*. New York: Harper & Row.
- International Association of School Librarianship. (2002). *School Libraries Online*. Retrieved from <http://www.iasl-slo.org>.
- Jackson, J. W. (1983). Contact theory of intergroup hostility: a review and evaluation of the theoretical and empirical literature. *International Journal of Group Tensions*, 23(1), 43-65.
- McDermott, G. (1980). *Sun flight*. New York: Four Winds Press.
- Meek, M. (1982). *Learning to read*. London: Bodley House.
- Moore, P., & St. George, A. (1991). Children as information seekers: the cognitive demands of books and library systems. *School Library Media Quarterly*, 19, 161-168.
- National Center for Education Statistics. (1998). US Department of Education, OERI: Washington, DC.
- President's Information Technology Advisory Committee, Panel on Digital Libraries (2001). *Digital libraries: universal access to human knowledge*. National Coordination Office for information Technology Research and Development: Washington, DC.
- Salzman, M., & D'Andrea, M. (2001). Assessing the impact of a prejudice prevention project. *Journal of Counseling & Development*, 79(3), 341-346.
- Solomon, P. (1993). Children's information retrieval behavior: a case analysis of an OPAC. *Journal of American Society for Information Science*, 44, 245-264.
- Vendley, G. (1998). Effect of a multi-ethnic, multicultural program on student participants. *NASPA Journal*, 35(3), 234-244.
- Walter, V. A., Borgman, C. L., & Hirsh, S. G. (1996). The science library catalog: a springboard for information literacy. *School Library Media Quarterly*, 24, 105-112.
- Wright, A. N. (1994). Multicultural education through shared adventure. *Coalition for Education in the Outdoors Research Symposium Proceedings*. Bradford Woods.
- Xiaobin, J., Yunxiang, D., Aiqin, S., & Xiaoyan, Z. (1996). China's primary and secondary school libraries, yesterday, today and tomorrow. *Proceedings of the 62nd International Federation of Library Associations General Conference*. Retrieved from <http://www.ifla.org/IV/ifla62/62-xiaj.htm>.
- Yolen, J. (2000). *How do dinosaurs say good night?* New York: The Blue Sky Press.



Professional Papers

Building Bridges Through Literature: A Practical Example and Ideas about Resource-Based Learning as Teamwork Between a Teacher, a Librarian, and Students in a Project about African History and Literature

Marianne Ageberg

Senior High School Librarian
Rudbecksskolan
Sweden

and

Lars-Göran Rådström

Teacher of Swedish Language and History
Rudbecksskolan
Sweden

The main purpose of this project was to study African history and how it can be traced in literature. It focused on early African kingdoms and both the colonial and post-colonial periods in West Africa and South Africa. The project was carried out in a group of thirty 17-year-old students, four of whom were from Africa and many others from the Middle East. The four main goals of the project were to (1) allow the students to experience other countries and cultures through literature, (2) build understanding between students with different backgrounds, (3) train the students in information literacy, and (4) develop cooperation between teachers and librarians.

Background and Ideas That Led to the Project

Mr. Rådström:

Many of my students are interested in non-European History or cultures in the world outside Western Europe. National curricula are always more or less ethnocentric as far as the study of history is concerned. One way of breaking that ethnocentric perspective is to give the students an opportunity to study more deeply the history of India, for example, with the purpose of seeing India from its own perspective. Over the years I have also noticed that many students are interested in African history simply because they do not know much about this subject except for certain things like the slave trade. Africa is the unknown continent for many young people in Sweden, and that perhaps makes it more interesting and arouses their curiosity.

In the autumn of 2002 I attended a seminar at the University of Uppsala about modern methods of teaching and writing history. One lecture had the title "Decolonization and history writing, an African perspective." The lecturer, Kerstin Keen, gave examples of the traditional ways of studying African history and also new ideas and angles. She mentioned, for instance, the possibility of seeing African history through the eyes of one country, like Ghana and thus reflecting the continent. To look at 20th century history from the South African perspective was another example. Kerstin Keen also emphasised the new possibilities that the Internet gives and gave tips of good web sites such as *The African Union*.

An important annual event in Sweden, other than except for the Nobel Prize, is the annual International Book Fair in Gothenburg with hundreds of authors from all over the world presenting their latest books in exhibitions and lectures. African Literature was a central topic in 200. Among many other authors the Somalian writer Waris Dirie visited the fair and presented her latest book, *Desert Flower*. For the first time in my life I had the great pleasure to visit the Göteborg Book Fair. I went in the company of Marianne Ageberg, the librarian at my school. We both participated in a seminar on African literature held by Karin Ruuth-Bäcker. Her book on the history of African Literature called *Bakom Maskerna (Behind the Masks)* had just been published. Karin, who has lived and travelled in Africa, was quite inspiring. She gave a survey of African literature and themes from early oral traditions (*griots*) and the Négritude in the 1930s to the literary revolution in the 1950s and new tendencies in present-day literature.

Back at school Ms. Ageberg and I started to discuss if we could go further with our new experiences regarding African literature and the idea of co-operation between history-literature and the library was born. We decided to call the project "Building Bridges Through Literature." In one of my classes I teach both history and the Swedish language, doing most of the studies such as social science and history in the English language. Five of the students have African roots, so in many ways this particular class was ideal for the project.

The Realisation of the Project

In class, we started to discuss positive and negative views on Africa through Swedish media. On the positive side was sport: Sweden met both Nigeria and Senegal at the latest World Cup in football, and the students also knew about track-and field stars. Other fields were cultural activities such as music and dance. Some also noticed that Africa is very rich in natural resources. Nelson Mandela was a person they knew well. After this introduction we continued to look at Africa and its geographical setting. I described the different regions and the importance of the Sahara desert. The students were able to identify a number of nations and their location on a blind map of the Africa.

At the second lesson I lectured on African history mainly by giving the students a chronological time-line and the possibility to divide the history into certain specific periods. The purpose was also to give them ideas that they could select for their deeper study. Concentrating on Africa south of the Sahara desert, I gave my students the main outlines in the different regions: West African history with the early great kingdoms (which many students found very interesting), East African history with early city-states, the southern region where Great Zimbabwe was of great interest, and the history of Congo representing Central Africa.

The next steps were for the students to form a group, choose a subject, write down basic questions in the logbook, and start working in the library. Students wanted to work on the following themes:

1. Morocco through history
2. West African History
3. The slave trade
4. Women's situation in African history
5. Nigeria and the slave trade
6. South Africa
7. The role of the Boers
8. Great Zimbabwe
9. The history of Rwanda
10. Tanzania and its history
11. The history of Kenya

The School Library at Rudbecksskolan

Ms. Ageberg:

Our library is located in the oldest part of the school, in the old castle, more than one hundred years old. The library is rather big compared to other school libraries in Sweden. Its 350 square meters are divided into four rooms plus two rooms for the staff. In one room the ceiling is "heavenly," as one student wrote in a questionnaire several years ago when we planned to remodel the library after 30 years. The student was anxious for us to ask the builders to promise not to destroy this very old and beautiful room where you can get a feeling of being in another world, so different from the ordinary classrooms or the school corridors. The 100-year old bookshelves in three storeys are original, just like the grand oak table in the middle. Teachers had their meetings here, and no students were allowed to enter this very "secret" room until the day they had passed their exams and were given their certificates.

The Modern School Library

Today it is different. In the Senior High School Reform of 1967 it was decided that all schools should have libraries for their students. At Rudbecksskolan three more classrooms were added to the beautiful Gallery room, one of which was divided into four study sections. At that time our school was a Technical School for training engineers. Our students today are proud of the school's heritage and still call it "Teknis". It is a completely different school for our students today, and more changes in programmes and methods will be introduced in the near future. Since 1998, when I became the librarian of Rudbecksskolan, many innovations have been made in programmes, curricula and methods partly due to the revolution in information technology. The use of computers is, of course, universal, and the World Wide Web has greatly changed the school library and the daily work for a school librarian.

A School Librarian's Role

In the summer of 2001 I was fortunate to meet with Professor David Loertscher at San José State University in California. Among our inspiring discussions, he said to me, "Remember, Marianne, you are a professional librarian and guide to the information resources; you are the one to capture the information space for your students in your school. Someone else will do it otherwise. Be sure to capture it!" This is a great challenge for school librarians! We have the opportunity to be seen and to put into practice our professional qualifications. Our role in students' learning process is important.

In the modern school, where the focus is on students' learning and independent study, there must be well-equipped libraries, active school librarians, and teachers willing to cooperate and integrate the library in their teaching. Teachers and librarians should not give students too much independence or let them drift aimlessly. It is important for tutors to have to help them to structure a project and supervise them through the working process. The logbook is an excellent way to keep track of how they proceed. Let me give you two examples I came across just as we had started our African History and Literature Project.

Some students came to me in the library and asked where they could find something about political conflicts in Africa and about slavery in 17th century Africa. Another group wanted to know where I had all the books written by African writers. They were supposed to choose one. This, of course, happens all the time in the library: students come with their questions and ask me to point to, or even pull, books from the shelves or find articles on their specific subjects. This time I was very happy since I knew they were students in Mr. Rådström's class and I was therefore already prepared about the assignments to which their different questions referred. I also knew I was going to meet these students and support them on more than just this special occasion. It is important for the librarian to become part of the curriculum and what is actually being taught in the school: they can then become more engaged, know better what books to collect or media to use, and contribute to the students' learning process in a much more qualified way. Students notice when the librarian is familiar with their assignment, problems, and questions, and they feel more confident to ask questions when they know that their teacher has planned the work together with the librarian.

Sometimes students have come up to me saying in frustration, “Is it really true that you don’t know that we are two classes working together in a big project about the Holocaust and that it will continue for several weeks,” or “We need lots of books, materials, articles, web sites and stuff... and you don’t know anything about it!” A week later I read about the project in our local newspaper and the students and teachers visiting the concentration camp in Auschwitz. Then I suddenly understood why so many of my students had asked if they could check out *The Diary of Anne Frank* from the library. We have quite a few copies, but there were still not enough. I realised I had to remind the teachers strongly again that they should not forget to tell me about their plans, especially their big projects.

The Importance of Co-Operation

As long as I am the only librarian at my school with about 1200 students, 40 classes, and 100 teachers, it is unrealistic to believe I can serve all the different projects and fields there are in the curriculum each term. Nevertheless, there should be better co-operation between principals, teachers, and librarians. At the Hulebäck Senior High School on the West Coast of Sweden, there is one librarian for each of the school’s programmes, one librarian co-operating with one principal and one group of teachers. The students are positive, and the teachers feel they get support in tutoring large groups of teenagers. Since the teachers often plan projects together with the librarians, they know that the librarians are prepared when the students are sent to the library to look for information. The school librarians can serve as links between research and learning.

The Senior Project: A New Course and Method

In 2000 it became compulsory for all senior high school students in Sweden to carry out a certain amount of research as part of their learning—a Senior Project in third grade. No matter whether this project is theoretical or practical, it must be presented together with a written report showing procedures, results, and a final evaluation. A general model for the Senior Project includes basic ideas, a plan, procedure, a presentation and an evaluation. As Mr. Rådström and I planned our African Project, we decided to use this model to structure the work with the students as well as for our own co-operation. We refer to it as a “Mini project” that prepares the students for the “big thing” in the third grade.

In the curriculum of this 100 points-course there are three student goals in which the school librarian can have a role:

- how to choose a field and define a particular problem within that field,
- how to choose relevant materials and method as well as relevant tools, and
- finally how to evaluate the procedure and the result in either a specific report or an oral presentation.

In the first two stages the students brainstorm, explore, focus on a subject, and finally formulate a problem or a question, discuss different methods, and determine where to look for useful information. School librarians can support the students in these stages but only if they are involved from the start and the teachers keep them informed about the chosen subjects. I had that opportunity with the African Project. Mr. Rådström and I discussed the work together from the beginning: he showed me the text books and gave me his schedule and the planning for his lessons.

Practical Workshop in the Library

When the students came to me in the library, one group at a time, I felt prepared and I could answer their most important questions. I could start a discussion, help them sift and sort information, evaluate their sources, especially those found on the Internet. In this “library workshop” I could catch their curiosity, train them in efficient search strategies to save time, and help them find more valuable web sites, articles, or books. I could also help them plan and structure their project. It is so enjoyable to have a group of students more motivated than usual to tutor in the library, students who know what they are looking for and who are about to formulate a question or solve a problem. Some have perhaps decided to tackle the problem by either trying to get in contact with an expert or finding written material. Some have decided how to present the work as an exhibition, a *PowerPoint* presentation, or an essay. This is so different from meeting the students in a vacuum, where the librarian is not at all involved in the curriculum or even their courses or studies. It is pointless to give lessons in information literacy if they are isolated and not connected to the subjects.

As we know from research and theories by experts like Dr. Carol Kuhlthau, information literacy is not a general process that follows a strict order. It is instead an integrated part of the learning process as a whole. School librarians have to think in a different way, and one way to help students through the process is to meet individually with them in “library workshops” now and then when they need information and resources of different kinds. Be there to help the student in that very moment when s/he is curious, motivated, and eager to grab and swallow the information s/he has been looking for – it is so rewarding to see the gleam in students’ eyes!

A Structured Checklist

In our African Project I had the chance to experience this with our students and I am convinced that we are on the right track. I test different models and feel my way by pinching bits and pieces from colleagues and others. My goal is to create a model with materials just for Rudbecksskolan that can be used by our students and teachers. I am planning this with two teachers’ colleagues, and we want to stress that this quick list is to be used in connection with tutoring students who are working on a project. It is not a self-instructional tutorial for students to follow step-by-step without support and a dialogue with their librarian. It could be part of the logbook that every student keeps to show how his work is progressing.

After the students registered for a library workshop but before they came to the library, I gave them the following questionnaire:

- What is your project about?
- How much do you already know about the subject?
- What more do you want to know?
- Make a list of keywords for your research.

Their answers were an excellent aid for me in preparing for the workshop, and they gave me an opportunity to create a tailored workshop specific to the subject.

When I met with the students in the African project for the first time, I demonstrated how to find information on the Internet by using keywords such as the slave trade, female circumcision, the political situation in Somalia, the Boers, imperialism, and animism. I showed them how to use our school library web page to find books, articles, useful databases, and links in categories. I also mentioned public authorities, such as the National Social Welfare Board (Socialstyrelsen) and the Swedish International Development Authority (SIDA), and private organisations, such as Rädde Barnen (IUCW) and Solidaritetshuset, where they can find material or talk to experts within specific areas. We also examined web sites together to make the students aware of how important it is to be critical of sources and not believe that all on the Internet is true. There can be many different approaches to one particular issue.

In our school there is an extra meeting-room close to the library, so that it is possible for workshop students to use both traditional media and web sites. If a student wants to read about the history of slavery, for example, it can be easier and quicker to go to books and articles instead of surfing the Internet. Some students discovered this after browsing on the Internet for an hour or so. When they turned to the books, they quickly and happily found what they were looking for: surveys, whole chapters, historical dates, and pictures. Students are actually “detectives” when they start their serious research. What they also need is patience. They should not worry if it takes time before they find a valuable clue in their searching process.

The Literary Part of the Project

Mr. R dstr m:

When the students started to study African history, I began introducing African literature in their Swedish lessons. Since reading poetry is often a good way to become familiar with a new literary tradition, I chose some poems that were not only easy to understand but also represented different fields of African poetry. We read "Ijala poetry" from old Nigeria, representing the oral tradition, and poems by Léopold Sédhogo and Michael Françoise Dei-Anang. The most appreciated poem was Okot p'Bitek's "Song of Lawin" where the students could see the typical conflict between the African and the European way of living and thinking.

The next stage was to read excerpts from novels: Chinua Achebe's *Things Fall Apart* from West Africa, Peter Abraham's *A Night of Their Own* from South Africa and Ngugi wa Thiong'o's *The River Between* from Kenya. The students were touched by the apartheid system described in the book by Peter Abraham. We discussed the literature in groups of five or six which enabled each one to have an opinion and to take an active role in the discussions.

After these preparations the students selected a novel from the country/region that they were studying in history. It was not easy to find the Swedish translations of African novels in the book stores or to get publishing firms to supply several copies for a group of students. The groups studying South Africa found authors like André Brink and J.M. Coetzee, the West African group found Buchi Emecheta from Nigeria, and the Moroccan group found Ben Jelloun, and many of the girls wanted to read Waris Dirie. Parallel to this the class also studied African literature with their English teacher, and many read a complete novel in English. One can say they got quite a good view of African literature.

The Presentations

The history groups presented their work both as a written report and in front of the class. They used various forms of presentations: *PowerPoint*, video films, different forms of dialogues such as role-playing, interviews, and one "news programme" on TV. In the literary part, each student wrote a review discussing how African history and society were reflected in their novel. Another overall question was to consider whether literature can contribute to an understanding of people from different cultures and thereby build bridges between people. After I had read their reviews, we had "book talks" and discussions in groups. I must say it was really interesting to listen to their opinions and reflections about the role and possibilities of literature.

An Invited Expert

In February a visitor, Karin Ruuth-Bäcker, came to our school and gave two lectures on "a literary journey through Africa." She is an expert on African literature who has recently had a great deal of attention for her book *Bakom Maskerna (Behind the Masks)*. It is an introduction to modern African Fiction south of Sahara that has filled a gap in Sweden, since most texts about African writers are either in English or French. Karin Ruuth-Bäcker, who is 79 years old, has worked for many years in Africa commissioned by the United Nations and the Swedish International Development Authority.

Ms. Ruuth-Bäcker has lived in several different African countries and has gained an insight into the rich culture and literature as well as into the inhabitants' natural surroundings. She discussed the local African authors less well known in Sweden such as Chinua Achebe, Ferdinand Oyono, Buchi Emecheta, Ama Ata Aidoo, Ben Okri, Camera Laye, Alex La Guma and Yvonne Vera. Her book gives a very clear and interesting survey. All listeners were very impressed by her deep knowledge and her telling of stories, poems and proverbs out of the rich treasure of writings from this part of the world. She also pointed out connections between the history and literature. Many of us were inspired to read more texts by African writers and learn about the special features typical and unique for this literary tradition. We were told about the *griots* playing on the *cora*, having the gift for telling stories and their importance in passing on the oral tradition. Many Swedish children today are familiar with some of the so called "Dilemma Stories," since they were translated into Swedish by Janne Lundström, a famous author of books for children; they have a very special touch with a lot of wisdom as well as humour. It was interesting to hear that Amos Tutuola's book *The Palmwine Drinkard* (translated

into Swedish in 1958) was one of the first African novels to attract much attention in Europe, largely because of an enthusiastic review by Dylan Thomas! The “been to-syndrome” as a background to and explanation to the famous poem “Song of Lawino” was another fascinating memory from the lecture by our guest and expert on African Literature.

A Literary Seminar in Stockholm and Ideas for the Future

Mr. R dstr m and Ms. Ageberg:

Later in March we had the opportunity to meet Karin Ruuth-Bäcker again in Stockholm. We attended a course arranged by SIDA especially for teachers and librarians all around Sweden. The theme was “Literature from the Warm Countries in the World” (Africa, Asia and Latin America). There was overwhelming interest in the seminar, so we felt lucky to have been accepted among 250 of 500 persons! At the seminar we were introduced to two young African writers now living in Sweden, Yeshiwork Wondmeneh from Ethiopia and Cletus Nelson Nwadike from Nigeria. They both gave a vivid picture of their native countries with their stories, humour, music and customs, sometimes so different from ours and sometimes so very similar.

As we continue to work with our project we realise how much it has grown from the start last autumn. Just like our students, we learn something all the time and get new ideas. We are convinced that we want to develop this project and continue to co-operate. One of our plans is to create a section in the library where we can present the literature from Africa, Asia and Latin America. The authors of these continents are often forgotten in our Western world. One reason, of course, is that very few translations exist. Although our literary focus has in the past been focused on Europe and the US, we now want to let our students meet more of the richness in history, culture and experiences in the “warm countries” through fiction. We have confirmed that through novels and poetry students gain knowledge and understanding. Young people in Africa live different lives compared to Swedish teenagers. Still, as Karin Ruuth-Bäcker says, it is fascinating to observe that in spite of all the differences, there are so many similarities in the way young people experience their own situation and the adult world wherever in the world they live.

Bibliography

The African Union 2002. Retrieved from www.africa-union.org.

The Göteborg Book Fair. Retrieved from www.bok-bibliotek.se/indexeng.html.

Kuhlthau, Carol C (1994). *Teaching the Library Research Process* (2d ed.). Metuchen, NJ: Scarecrow Press.

Loertscher, David V (2000): *Taxonomies of the School Library Media Program* (2nd ed.). San José, California:

The Nordic Africa Institute. Retrieved from www.nai.uu.se.

The Norwegian Council of Africa (NOCA). Retrieved from www.afrika.no.

Rudbecksskolan Library. Retrieved from www.ru.orebro.se/biblioteket/main.asp.

Ruuth-Bäcker, Karin (2002). *Bakom maskerna (Behind the masks). En introduktion till den moderna afrikanska litteraturen söder om Sahara*. Gothenburg, Sweden

Söderblom, Inga (1981). *Afrika, Afrika. Texter och litteraturhistoria (Utomeuropeisk litteratur)*. Stockholm, Sweden:

Stripling, B.K. (Ed.). (1999). *Learning and Libraries in an Information Age: Principles and Practice*. Englewood, Colorado:

The Swedish International Development Authority. Retrieved from www.sida.se.

The Swedish National Agency for Education. Retrieved from www.skolverket.se.

The Swedish Schoolnet. Retrieved from www.skolutveckling.se/skolnet/english.

Biographical Notes

Marianne Ageberg is a Senior High School Librarian in a town called Örebro with around 120 000 inhabitants, not far from Stockholm in Sweden. Rudbecksskolan has 1 200 students and five national programmes, mostly theoretical such as the Natural Science Programme and the Social Science Programme. She enjoys working in co-operation with teachers and believes that if the school library is well integrated in the curriculum the students will get better and richer learning situations and a more qualified education. She has also worked in public libraries and in the library at a Teacher training college in Malmö. Since 1990 she has been a member of IASL. This will be her fifth conference. Last year in Malaysia she was a presenter for the first time.

Lars-Göran Rådström lives in Örebro, an average-sized town in the central part of Sweden, roughly between Stockholm and Gothenburg. He teaches the Swedish Language and History at Rudbecksskolan, an upper secondary school. He teaches most of the history in English, which is part of the international profile of the school.

Ulf Akerberg

Deputy Director, The Pedagogical Centre of Malmö
Sweden

ECOLE is a Comenius 3 Network under the SOCRATES programme in the field of education running from 2002-2004. The main goal of Comenius Networks is to create links between projects carried out by school partnerships and those relating to the training of school education staff. This paper presents the outcome of the first year of the project with a special emphasis on the information and communication (ICT) infrastructure and the events. Project description covers an interactive website comprising information related to the activities of the network and an advisory reference point on running projects, database with projects, best practices, online teacher training, open working areas, project space, communication tools and so on.

The European Union has played an important role in supporting the use and development of ICT for pedagogical purposes in the schools of Europe, not only to the fifteen member states, but also to the EFTA/EEA countries (Iceland, Liechtenstein, Norway) and the associated countries from Central and Eastern Europe (Bulgaria, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia and Slovenia) and Cyprus, Malta and Turkey (European Union, 2003, <http://europa.eu.int/>)

There is also an EC/US cooperation programme comprising higher education and vocational education and training (http://europa.eu.int/comm/education/programmes/eu-usa/usa_en.html), multinational partnerships for cooperation in higher education and training between EC and Canada (<http://europa.eu.int/comm/education/canada/canada.html>) and pilot cooperation projects with Australia (<http://europa.eu.int/comm/education/australia/australia.html>) and Japan (<http://europa.eu.int/comm/education/japan/japan.html>).

SOCRATES is a community action programme in the field of education comprising eight separate actions:

- *Comenius*: school education
 - *Erasmus*: higher education
 - *Grundtvig*: adult education and other education pathways
 - *Lingua*: learning European languages
 - *Minerva*: information and communication technologies (ICT) in education
 - Observation and innovation of education systems and policies
 - Joint actions with other European programmes
 - Supplementary measures
- (<http://europa.eu.int/comm/education/socrates.html>)

ECOLE is a Comenius 3 Network under the SOCRATES programme in the field of education running from 2002-2004. The main goal of Comenius Networks is to create links between projects carried out by school partnerships and those relating to the training of school educators.

The Consortium

The network consortium consists of ten participating institutions from ten different countries representing a wide and complementary expertise and experience in the field of applied ICT-usage in compulsory education and in educational network organisations. The partnership includes universities, research institutes, pedagogical centres, local and national public authorities, and a large primary and secondary school. Countries involved are: the Netherlands, Italy, Slovenia, Portugal, Spain, the Czech Republic, Estonia, Denmark, Sweden and Norway.

1250 schools all over Europe are already in contact with ECOLE partners.

Thematic Area

The thematic area addressed by the ECOLE network is the educational use of ICT with the focus on how technology implementation can contribute to spreading the practice of Collaborative Learning at school.

The ECOLE Network is a networked and web-based organisation in which support for ICT-based collaborative learning projects and other innovative applications is offered. ECOLE aims at innovating didactic practice at school by using Information and Communication Technology (ICT) for Collaborative Learning projects.

Overall Objective

The overall objective of ECOLE is to make available content for collaborative learning projects, in combination with making available content for teacher education, and the creation of a learning community of teachers and pupils within compulsory education.

Teachers from primary and secondary education who are involved in COMENIUS projects compose the target group that will directly benefit from ECOLE activities. As most of the networked activity will point at offering online services, the activity of ECOLE network will also be helpful in spreading the best of COMENIUS culture in the schools that are still not directly participating in COMENIUS projects.

Students and pupils form a target group that will indirectly benefit from ECOLE activities, as they will be involved in the collaborative projects. Other educational institutions with interest in the area can benefit from the activities of the network: universities, public authorities as well as teacher training institutes.

Main Activities

ECOLE is a network of pedagogical institutions and schools offering teachers pedagogical advisory services, technological tools, resources to plan, run and evaluate collaborative projects according to their didactical needs. The main activities of ECOLE will include:

- a) the establishment of the network itself;
- b) the involvement of schools to be monitored;
- c) the development of a website and web services;
- d) the development of pedagogical materials;
- e) an advisory service on ICT tools for education;
- f) the implementation of virtual training activities.

The content of the ECOLE activity itself will be built in accordance with the best practices run under the COMENIUS umbrella.

Main Envisaged Outcomes

Over the years the main envisaged outcomes of the network are:

- a) a survey of COMENIUS best practice available on the web;
- b) a platform for discussing projects and finding partners. Websites and a database of projects (in collaboration with European Schoolnet (<http://www.eun.org>), European Schools Project (<http://www.esp.uva.nl/>), and Socrates National agencies (<http://europa.eu.int/comm/education/socrates/nat-est.html>) will be linked to the central website;
- c) educational materials derived from the projects;
- d) a virtual advisory service about available Computer Supported Collaborative Learning tools;
- e) information will be given to teachers on how to design and plan collaborative Comenius1 projects;
- f) a taxonomy of ICT-based collaborative learning projects, to be reflected in web-based resources;
- g) e-learning courses: teacher training materials and e-learning courses (for teachers and teacher trainers) are created on the basis of building blocks and conditions for successful European Collaborative Learning projects.

Conferences

Annual conferences are organized for teachers, other educational actors, national agencies, and policy makers. These conferences provide ample opportunity to explore ICT-tools for e-learning, and to design, plan and evaluate both content materials and computer-supported collaborative projects. In addition specific teacher training workshops are offered. Starting in the second year of activity ECOLE will also offer e-learning courses: teacher training materials and e-learning courses (for teachers and teacher trainers) are created on the basis of building blocks and conditions for successful European Collaborative Learning projects.

Impact

The activity of ECOLE will have an impact on teachers target groups in several layers:

- a) Teachers participating in projects will benefit from the collection of Comenius best practices and this will improve their skills in *planning*, *running* and *evaluating* such projects;
- b) Teachers will benefit from the proposal of tools for collaborative teaching and learning. They will also be able to analyse the relationship between tools and the specific didactic content in terms of learning effectiveness;
- c) Teachers will benefit from participating in virtual sessions of teacher training by having the possibility of following more courses than they could do by participating in presence;
- d) Teachers will have online resources available to be sustained for all the duration of planned projects;
- e) Teachers will have the possibility to have direct contacts with colleagues and experts during the conferences taking advantages from a supervision of collaborative projects from their very beginning. ECOLE will also impact on students, as some tools will be available for them for direct collaboration.

This paper presents the outcome of the first year with a special emphasis on the ICT infrastructure and the events: An interactive website comprising information related to the activities of the network and an advisory reference point on running projects, database with projects, best practices, online teacher training, open working areas, project space, communication tools etc.

As ECOLE is meant to be an open network, all the materials and service offered will be available for all teachers and librarians within compulsory education and also for teachers within teacher academies and in-service teacher training institutes, policy makers, universities etc.

ECOLE Infrastructure and Tools

Establishment of the Network Itself

The ECOLE partners are all experienced ICT users, so establishing a network for this group was easily done. Our intention was, however, to use the same tools and environments that we were going to offer participants. This meant an interactive website, a virtual environment with workspace for different purposes and tools for virtual training activities.

Development of a website and web services

The project language is English and consequently the main website is in English (<http://www.ecolenet.nl/>). English is not always the first foreign language, however, so to be able to spread information about the project to as many as possible, the website is also available in Czech, Danish, Italian, Norwegian, Portuguese, and Slovenian languages. There are also summaries in Czech, Danish, Dutch, Italian, Norwegian, Portuguese, Slovenian, and Swedish languages.

Events

The *Events* button leads to extensive information about our conferences so far in the project:

Bridges for Learning

International Conference on the Educational Use of ICT for Collaborative Learning and Teaching Charles University Prague, Czech Republic. 12-14 September 2002 (<http://it.pedf.cuni.cz/ECOLE/conf01.htm>)

“Bridges for Learning” was the first conference organized by the Comenius 3 European Collaborative Learning Network. The focus of the conference was on three clusters of subjects:

1. Design, planning and evaluation of computer supported collaborative learning projects;
2. Teachers’ professional development in internationalization, project-based learning and teaching, and ICT-usage;
3. Exploration of electronic learning environments and advanced ICT-tools for collaborative learning and teaching.

The conference was meant for primary and secondary school teachers, teacher educators, policy makers, and researchers. The spirit of collaboration was fostered by interactive sessions and workshops in which learning from and with each other was central: we all could share our projects, thoughts and ideas, thus building the bridges for learning.

The conference was also an international contact seminar for Comenius 1 projects. Teachers involved in Comenius 1 projects could use part of their budget to visit the conference. The programme included lectures and presentations on:

- The European Collaborative Learning Network - What is it?
- Theory - What are the backgrounds of Collaborative Learning?
- Best Practice - What examples do we have of CSCL-projects?
- Tools - What is the extra value of Electronic Learning Environments?
- Design, planning & evaluation of CSCL-projects
- Presentation of Comenius projects
- Professional development of teachers in European perspective
- Lessons from Comenius 2 projects
- Internationalization
- An overview of Electronic Learning Environments

And also workshops for

- primary school teachers
- secondary school teachers, language
- secondary school teachers, math & science
- secondary school teachers, social sciences

All presentations and documents are available in The ECOLE FC environment.

Bridging Best Practices

The international conference *Bridging Best Practices* was promoted by the ECOLE network in co-operation with the European Schools Project (ESP). All ECOLE partners but one are actually board members of the European Schools Project, since the idea of creating the ECOLE network was born within ESP. The conference aimed at connecting the best practices in Computer Supported Collaborative Learning. 6-9 March, 2003 in Rome, Italy. (<http://www.ecolenet.nl/2003/>)

This second conference was attended by 150 participants from 17 countries.

Lectures, presentations

The programme offered lectures of general interest such as:

- Bridging Best Practices: A Joint Event
- An Early Literacy Telecommunication Exchange Pilot Project
- The Comenius Best ICT Practices
- How to Describe Innovation
- How to Organize Your Project Evaluation

as well as several different strands like

- Language Teaching
- Exact Science
- Social Science
- Tools for Learning
- Teacher Training Opportunities
- Bridges to Other Nets

and lots of project presentations

All presentations and documents are available on the conference website (<http://www.ecolenet.nl/2003> - Go to *Contributions!*)

Workshops

Workshops constitute a very important part of the conference. This is where experiences are shared, where new project proposals are born and where partnership is established. There were parallel workshops for language teachers, social science teachers, exact science teachers and head teachers with the possibility to move around for cross-curricula projects or perhaps as a messenger for a colleague back home.

Electronic forms on the conference site give the opportunity to send a proposal or information about an agreed project directly to a database. This on-line facility is available to anyone interested, not only those attending the conference. The ECOLE conference was also a Comenius contact seminar and thematic conference. (<http://www.ecolenet.nl/contactseminar.html>)

Projects

The Projects area invites you to the ECOLE project house. If you peek through the windows, you can find different project-related objects like:

- *Project Help*, where you find information about implementing international projects in schools (Stampe Rasmussen, Lise <http://www.ecolenet.nl/projects/internationalisation.html>) but also guidelines for evaluating your European project (McLeod, Rosetta <http://www.aberdeen-education.org.uk/european/resources/guidef.htm>).
- *Educational Projects*, which leads to Taxonomy and Examples of Internet Projects by our Czech partner Bofiivoj Brdička. (<http://omicron.felk.cvut.cz/~bovr/role/projects/>). It includes a detailed taxonomy of project types, where Bofiivoj Brdička describes different categories of projects and links to several examples within each category based on the activity structure classification by Judi Harris, University of Texas at Austin (<http://www.citejournal.org/vol1/iss3/seminal/article1.htm>).

- *Project Presentations* are intended as inspiration and help for teachers who are about to start.
- *Project Proposals* invites anyone interested to join in and start collaborating.
- *ECOLE Best Club*. The projects house has not only windows, but also a door leading to ECOLE Best Club. The club activities aim at developing an interactive platform to collect best practices, disseminate information and develop interactive resources to teachers involved in Computer Supported Collaborative Learning. The club offers links to projects, useful tools, on-line articles, distance training etc.

A virtual environment

Websites, mailing-lists and e-mail are all good tools for collaborative learning, but you also need a place to meet where you can communicate, where you can store your common documents etc. You need a community. There are lots of communities to choose among. Some cost money, some are free, at least at the start. We have chosen the First Class environment and made a deal with Centrinity AB, Sweden (Now OpenText) to use it for free for this project.

Account

By registering your interest on the ECOLE website, you get an account by e-mail and you are ready to join the community for free. You can use a web browser or a client, which is recommended especially for slow Internet connections.

Personal Desktop

The desktop you get, when you log in, looks different depending on who you are. The partners for instance have areas and conferences that are not visible to others. If a project group wants some private space for their project to save material and discuss things, while they are working, this area is also visible only to them. When you feel ready to share with the others in the community, we make it visible. Anyone involved in a collaborative learning project can get this for free.

Mailbox

When you send and receive internal mail (to and from others in the community), you use your real name (e.g. Ulf Akerberg), but you can also receive and send ordinary, external e-mail. When you send e-mail to someone outside the community, your e-mail address will be firstname.lastname@ecole.pedc.se and if someone outside the community wants to send you an e-mail, they use this same address (e.g. ulf.akerberg@ecole.pedc.se). An interesting feature in this environment is that you can see when/if people have read your message and downloaded attached files.

Conferences

There are general conferences for different purposes, folders with documents of various kinds: papers, presentations, forms, tips and good ideas etc.

Calendar

You have a personal calendar, but you can also get a group calendar for a project to share with your partners.

Discussions

You can get all sorts of discussion fora, for everyone or for a group.

Chats

There are different kinds of chat fora. There is a public chat that every community member can take part in, but you can also obtain a project chat forum or have private chats.

Tools for virtual training activities

Many schools and institutions use the First Class environment for e-learning, but we wanted to offer some more functionality and made a company called Sigma Education co-operate on this with Centrinity (now OpenText). As a result of this the e-learning functionality of Sigma's product *Colleen* has been integrated into ECOLE First Class, which means that you reach both with a single login. To use Colleen you have to login to FC using a browser.

What to do with Colleen

Colleen is a tool to create and distribute course material. Every community member has the right to use this tool to inform, train or educate other members.

Create a course

You create a course by using the basic tools within Colleen. By choosing "Create document" you get a form to fill in Name of course item, Information about course item (e.g. questions or instructions) and Estimated study time, then click on *Create* and that is it.

A new toolbar is displayed with different tools to build the document:

- Insert headline
- Insert hyperlink
- Insert text
- Insert image/text
- Insert text/image
- Insert bullet list

Everything is done by filling in simple forms. After creating a course item you can edit it and make changes of course, but you can also re-use course items or give them to others to use.

You are not restricted to use the editing tools in Colleen. You can actually insert any kind of course item such as word-documents, pdf-documents, html-documents, flash-files etc. etc.

Required Knowledge Test / Final Test

When you have finished your course items, you can easily create a "Required knowledge test" and/or a "Final test" by linking questions to your course items in a form. To each question you have to enter "Answer alternatives". You also mark the appropriate "True" boxes to indicate which answer alternatives are correct. You can mark several answer alternatives as right, if you like.

The "Required knowledge test" tells the user what course items she/he should concentrate on, while the "Final test" hopefully indicates that the user has profited by the course.

When you have finished creating your course, with or without tests, you probably want to make it available. You do that easily by choosing "Add course to public courses". Then it is automatically available to all members of the community. Of course you can take it back and re-work it at any time.

3-D ECOLE

Students of all ages tend to be more particular about the user interface than many teachers. Probably because they are more used to virtual environments and are definitely more frequent users. One way to comply with the students' wishes is to explore new environments with perhaps more tempting features. One good example of this is Active Worlds Educational Universe, which is a 3-D platform, where you can create your own world adapted to your demands. (<http://www.activeworlds.com/edu/awedu.asp>) This will be offered later this year and will be announced on the ECOLE website.

Invitation to collaborate

The project period ends in October 2004. Everyone interested in collaborative learning is invited to follow the further development of this project and also to take active part.

Next conference will take place in Prague in March 2004. Welcome!

References

Active Worlds Educational Universe. Retrieved May 26, 2003 from <http://www.activeworlds.com/edu/awedu.asp>

Brdiāka, Bofiivoj. *Taxonomy and Examples of Internet Projects*. Retrieved May 26, 2003 from <http://omicron.felk.cvut.cz/~bobr/role/projects/>

ECOLE Main Website. Retrieved May 26, 2003 from <http://www.ecolenet.nl>

ECOLE Conference Website 2002. Retrieved May 26, 2003 from <http://it.pedf.cuni.cz/ECOLE/conf01.htm>

ECOLE Conference Website 2003. Retrieved May 26, 2003 from <http://www.ecolenet.nl/2003>

ECOLE Contact Seminar. Retrieved May 26, 2003 from <http://www.ecolenet.nl/contactseminar.html>

ECOLE First Class. Retrieved May 26, 2003 from <http://fc.ecole.pedc.se/>

EC/US cooperation programme in higher education and vocational education and training. Retrieved May 26, 2003 from http://europa.eu.int/comm/education/programmes/eu-usa/usa_en.html

European Schoolnet. Retrieved May 26, 2003 from <http://www.eun.org>

European Schools Project. Retrieved May 26, 2003 from <http://www.esp.uva.nl/>

European Union On-Line. Retrieved May 26, 2003 from <http://europa.eu.int/>

Harris, Judi. *Teachers as telecollaborative project designers: A curriculum-based approach*. Retrieved March 15, 2003 from <http://www.citejournal.org/vol1/iss3/seminal/article1.htm>

McLeod, Rosetta. *Guidelines for Evaluating Your European Project*. Retrieved March 15, 2003 from <http://www.aberdeen-education.org.uk/european/resources/guidef.htm>

Multinational Partnerships for Cooperation in Higher Education and Training between EC and Canada. Retrieved March 15, 2003, from <http://europa.eu.int/comm/education/canada/canada.html>

Pilot Cooperation Projects with Australia. Retrieved May 13, 2003 from <http://europa.eu.int/comm/education/australia/australia.html>

Pilot Cooperation Projects with Japan. Retrieved May 13, 2003 from <http://europa.eu.int/comm/education/japan/japan.html>

SOCRATES. Retrieved May 26, 2003 from <http://europa.eu.int/comm/education/socrates.html>

Socrates National Agencies. Retrieved May 26, 2003 from http://europa.eu.int/comm/education/programmes/socrates/nat-est_en.html

Stampe Rasmussen, Lise. *Internationalization in Danish Schools*. Retrieved March 15, 2003 from <http://www.ecolenet.nl/projects/internationalisation.html>

Biographical Note

Ulf Akerberg (BA degree, Lund University) did some research on Swedish drama at Stockholm University in the early seventies. He worked as a teacher in upper secondary school until 1978. He was head teacher at Sodervarn College of Nursing from 1978-1994, where he developed educational software like Virtual Educational Hospital, Medical Mathematics, Medical Terminology and Medical English. Since 1991, he has been working with in-service teacher training and flexible learning in collaboration with Lund University and Malmo University. From 1994 he has been responsible for ICT development for pedagogical purposes and international projects at The Pedagogical Centre of Malmo. From 2002 he has been deputy director of this center.

The Carnegie Revitalisation of Public Libraries in Africa: A Possible Tool for Breaking Down Barriers to School Library Development?

Margaret Baffour-Awuah

Principal Librarian, Educational Libraries' Division
Botswana National Library Service
Gaborone
Botswana
mbaffour-awuah@gov.bw

The Carnegie Corporation of New York has embarked on a revitalisation programme of some African public libraries. The Corporation has made grants to those public library systems targeting previously disadvantaged communities. Those aspects of the programmes that the grantees have drawn up which could impact school library development in the recipient countries are highlighted here. The selected public libraries of Botswana, Kenya and five provinces within South Africa, as grantees of revitalisation awards are the objects of focus here. Seven other African countries that have benefited to a relatively lesser extent are mentioned as issues emerge that relate to them. Suggestions are made as to the impact some of these public library programmes could make on school libraries and school pupils.

Introduction

It was Carnegie, the man, who said "only in popular education can man erect the structure of an enduring civilisation." (<http://www.carnegie.org/>) Because of this belief, several decades after his death, the Carnegie sponsored revitalisation of public libraries in Africa is currently taking place. That revitalisation programme is the focus of this paper. The question the paper poses is: could the revitalisation of public libraries spill over enough to erode existing barriers to school library development? And could that erosion catapult school libraries in grantee countries across the digital divide? The paper looks at general barriers to school library development in Africa from the literature and a few specific barriers from contacts with school library / education personnel from the three countries.

The paper looks at what the revitalisation aim to achieve in these countries and what has been done so far. It attempts to hypothesise on the extent to which school libraries could be impacted. The main country foci are the three recipients of the Carnegie revitalisation award (Botswana, Kenya and South Africa). The other seven which have benefited in a smaller measure and might be more fully taken on board at a later stage: Uganda, Tanzania, Malawi, Zambia, Zimbabwe, Ghana, Nigeria, will be referred to in passing.

Background

Carnegie Corporation of New York

Andrew Carnegie, a self-made millionaire businessman had used libraries extensively as an immigrant from Scotland to the America. He never forgot the opportunities the public library system offered him to educate himself. What has driven his trusts, awards and endowments is the knowledge of opportunities a good public library, amply endowed with stock and staffed with educated and caring staff, could offer to people without the means to otherwise educate themselves.

Against that background, he created the Carnegie Corporation in 1911 to promote "the advancement and diffusion of knowledge and understanding." The terms of his will required that, grants be made from the Trust he had set up to benefit Americans. But it allowed for up to 7.4 percent of the funds to be used to benefit other countries especially within the British Commonwealth. In the early decades of the twentieth century, over \$56m was spent for the building of over two thousand free public libraries in the United States, Great Britain and in some British Commonwealth countries.

The Digital Divide

Strange as it may seem the concept of the digital divide was first emerged in America. It referred to the gap between individuals with access to computers and the Internet and those without.

Over the years it has come to be realised that it is much more embracing than this narrow viewpoint. Though access to ICT is the most common measurement of the presence of a digital divide, it has been realised that it embraces history economics health and a myriad of related issues. And even worse the divide is not just inter countries it is even present within the very same country. Its scope has been described as multidimensional. Attempts at bridging the divide must start with a realisation of this.

The only answer is the enablement of public access to information through schools, libraries and other community venues. That is why the revitalisation of public libraries remain such a welcoming programme as it has inherent potential to provide digital access to many people especially school children who would otherwise remain *informationally disenfranchised*.

The Public Libraries Revitalisation Programme

One of the Corporation's current emphases is on Commonwealth Africa, hence the ongoing revitalisation programme. As a grant making foundation, the Corporation continues to actualise the vision of its philanthropist founder: Andrew Carnegie. He hoped that his Carnegie Trust would do "real and permanent good in this world." This should be the ultimate aim of the libraries benefiting from the revitalisation programme: the permanent good of the communities being served.

Apart from libraries the Trust also supports other Programmes. Some of them are:

- Setting up of schools and institutions to promote professional development
- Research into methods of improving service delivery and user satisfaction within libraries
- Support for library associations

For the revitalisation programme currently ongoing, priority is given to countries with innovative ideas aimed at disadvantaged communities. The Corporation's aim is to revitalise some African Public Library Systems by building on their existing strengths.

The Corporation is more interested in supporting systems committed to the following objectives:

- Enhancement of local and national government support for activities, wide distribution of books and opening up the world to the community through provision of access to new technologies and networks.
- Contributing to the development of solid supporting relationships between the education systems and library systems. (this calls for real collaborative measures)
- Strengthening the roles of rural, community libraries and non-governmental organisations that augment public library services.
- An assessment of the impact public libraries make on the populations served impact of on
- Encouraging especially the private business world to forge collaborative links with governments to promote public libraries

Initial Moves Towards Revitalisation

A fact-finding mission was undertaken to some African countries including South Africa and Botswana in December 1998, then also in 2000. This was to obtain first hand information about:

- the status of library services in the countries;
- the professional development needs of librarians; and to
- investigate areas where the Carnegie Corporation could make investments that would have the widest impact.

The Role of the International Network for the Availability of Scientific Publications (INASP)

In April 1999, the Carnegie commissioned INASP, in Oxford, England, Corporation's board of trustee to compile a report and an annotated bibliography on the literature of public library services, staffing and collections in ten African Commonwealth Countries. These were Botswana, Ghana, Kenya, Nigeria, Malawi, South Africa, Tanzania, Uganda, Zambia and Zimbabwe.

This resulted in a document (Public Libraries in Africa, 2000): partly a report and partly an annotated bibliography of the ten countries' public library literature, from 1994 to the present. Though there could be omissions and gaps in the compilation, the Corporation believed that the reports represent a good up-to-date sum up of the status of services and funding in each country. The document was accepted as point from which to move towards stimulating dialogue about reform. It became a platform for action.

Issues Emerging from the literary investigation:

- The concept of public libraries had been alien to the highly oral African culture. No attempt had been made to indigenise these public libraries. They remained seen by local communities as largely foreign edifices without much regarded for the information needs of the African communities served.
- They did not address their role within the educational system of their countries.
- Most of them lacked adequately trained manpower
- They did not build up strength through resources sharing measures. Collaborative and co-operative ventures were hardly addressed
- Governments failed to recognise the importance of the role of libraries so there was no political will, and little support for these libraries.
- A weak publishing industry, (very likely the culprit behind the irrelevant materials presently held in most African public libraries)
- A culture still struggling to take reading on board
- An uncoordinated development of public libraries in Africa
- The absence of defined library policies, specifically for the public library sector
- None targeting of specific users groups such as children, young people, adult, literate, semi-literate, non-literate and others as focus for specialised services
- An imbalance in the provision of public library service between urban and rural areas

Following from that the Corporation granted awards for the development of the public library services in Kenya and Botswana. The Corporation also decided to give support to the Library and Information Association of South Africa (LIASA) and made grants to the three metropolitan library services and three provincial library services in South Africa.

The Situation of African Libraries in General

Not too many schools have libraries in most African countries. The few that have them are plagued by myriad problems.

Funding is a major issue, e.g. in Namibia only options which do not cost money were reported as being considered for library development and white schools had more money than black schools. (Totemeyer, 1996) An indication here of

internal divide in terms of provision across racial lines. In Nigeria, funding is very uneven between different states (Dike, 1991), and it is also uneven in Tanzania. In Botswana, and also in South Africa it is reported that school libraries have inadequate accommodation, or that what accommodation is available is vied for with other contending interests such as classroom teaching space, and even entertainment (Overduin, 1991). (Baffour- Awuah and Kalantle, 1995)

In South Africa where the ICT profile is relatively better, (fig 1) the distribution is very uneven Internet access is reportedly heavily concentrated in four provinces: Western Cape 53%, Gauteng: 20% Eastern Cape: 18%, and Kwazulu: 8%. 100s of school are reportedly involved with networking programmes. Some belong to UNINET. Major disadvantages here include: lack of local content (de Kock, Marie IFLA / ALP 1999) and none provision of material in local languages.

Kenya, Botswana, Tanzania, Zambia, and Zimbabwe all offer Book Box services to their schools because of non-existent or inadequate school library situation. These extension services, except in the case of Botswana, are made up of mostly donated books from Book Aid. In the case of Botswana book donations have come in from the Scottish charity, Books Abroad but have not been used in Book Box. The IFLA / ALP Project Report no 20 cites a whole list of factors that hinder rural access to use of ICT in rural secondary schools. It is worth repeating them here as they could very well be a recipe for the digital divide:

General Barriers to ICT Utilisation in Rural Schools.

All of these grantees to some extent are victims of what the literature describes as general barriers to ICT development. They are on the lack side of the divide. Some of the barriers identified in the literature are identified here:

- ***Technical***
 - lack of electricity
 - lack of ICT equipment
 - lack of adequate accommodation (+ security)
 - lack of telephone lines

- ***Psycho Social***
 - ignorance due to none exposure to ICT
 - competing demands on limited financial and human resources

- ***Economic***
 - prohibitive costs of equipment
 - cost of equipment (Mmambo, 1999)

It is the contention of this paper that all of these factors could be addressed by planned utilisation of the Carnegie grant in the grantee libraries.

The Situation in the Grantee Countries

Before analyses can be made as to what impact the public library services in the grantee countries could make on school libraries, in the utilisation of the Carnegie funding, there is need to look at the situation in these countries, in terms of ICT, generally, and the library situation.

It is particularly pertinent to look at costs of local phone calls, the size of bandwidth available the, Internet subscription and the GDP per person as this will give an idea of the size of factors that revitalisation could come up against. Again assessment of any issue should take cognisance of where the parties involved are coming from. It is clear from the data (fig 1), that there are vast differences in where the different countries are in terms of access to the Internet. A comparison with a first world country would not be fair, and that is not done.

The ICT situation is much more complex than is reflected in the table (Fig 1). This is because, even within countries the divide can be as wide as it is between nations; the American / Canadian situation that the Melinda Gates

foundation is trying to address is a case in point. Even in the most advanced countries income and other socio-economic issues prohibit access to free flow of information. The telephone costs may look very cheap but where the salary amounts to a couple of dollars a day and there are medical bills to pay food to provide using USD2.00 on a phone call would be a foolish luxury which very few can afford. Internet in that case would be a fairyland dream.

So that the digital divide is not just about computers, the world wide web. It is about economic and social issues. Yes it is about gap of access, but to so very many things. It is about poverty and illiteracy. About accommodation and security, about livelihood, deprivation and needing to make choices which the very survival of existence may be dependent on. The divide is really a commentary on the differences between our various societies.

ICT Profiles (Figure 1)

COUNTRY	GDP USD/ Per Person	Sub. Dial up Internet	Internet bandwidth (KBPS)	LOCAL PHONE COST PER HR.
Botswana	3252.0	20,000	6144	USD2.4
Ghana	372.00	8,000	2048	USD.74
Kenya	347.0	35,000	4096	USD1.36
Nigeria	551.0	10,000	1152	USD 0.4
South Africa	2979.0	650,000	400000	USD1.3
Tanzania	244.0	4,500	2048	USD1.94
Uganda	317.0	4,000	2048	USD2.93
Zambia	463.0	6,500	512	USD hr. 2.5
Zimbabwe	712	20,000	4096	USD hr. 0.6

The situation in Botswana, Kenya and South Africa is examined here but other countries which have also benefited to a certain extent or are hoping to benefit from future Carnegie grants will also be referred to, as their situation ties in, in terms of relevance when discussing a particular issue.

Botswana

The Botswana National Library Service (BNLS) was founded in 1967 to provide information and promote the utilisation of information for purposes of education, research, recreation and the promotion of literacy and culture of reading. The Botswana National Library Services motto: Go Bala Ke Lesedi means Reading and Light.

Botswana National Library Services in the course of fulfilling its mandate tries to lighten up the nation through provision of library services. This is done through a network of public, educational and special libraries. Botswana National Library Services is one of the most centralised library systems in the world. Apart from the University library and its two colleges of Agriculture and Engineering, Botswana National Library Services has technical responsibility for all government libraries. But its readership base is not very big. Its book stock in the entire network is approximately 400,000, with about 280 0761 of which is in the system.

The Situation in Botswana

Issak's report (Issak, 2000) paints the following picture from Botswana:

- Inability to meet high demand for services,
- Shortage of qualified staff
- Insufficient physical space, populations having outgrown the libraries
- Limited facilities for using modern technology
- Need for specialised training for the division catering for people with mental and physical challenges
- Need for co-operation with stakeholders

Possible Impact of Revitalisation

The revitalisation will broaden the BNLS readership and membership base and develop institutional capacity to enable the department to provide services more efficiently. And its fledging automation programme could become invigorated, as a result.

Four libraries have been recommended to be as model libraries. These are the public libraries of Gaborone, Francistown, Lobatse, and Serowe. Two of the libraries are in urban centres and two are in big rural villages. They serve highly populated areas; they have adequate current or projected space (earmarked for expansion within the next 2-3 years). Some of the goals set by the BNLS as a result of being a grantee include the following:

- Current Internet access situation of “staff only” will be extended to offer user general public access;
- The general book stock will be expanded in all the branch libraries, but the emphasis will be on the four model libraries;
- Stock evaluation in all branch libraries;
- User needs surveys are supposed to help identify manpower requirements;
- The formulation of a human resources development plan;
- Reviewing the collection development policy;
- The provision of relevant multimedia resources in the model libraries;
- Improvement of service delivery mechanisms for outreach programmes;
- Development of publicity programmes with the production of relevant publicity materials to promote awareness of information resources in the public library system;
- Exploring ways of creating a co-ordinated approach to the development of library services;
- Encouraging the growth of the book industry by formulating a national book policy;
- Promotion of local authorship;
- Promotion of reading;
- Ensuring the provision of relevant reading material;
- Repackaging of information to meet the information needs of communities;
- Exploring ways of redirecting staff training to ensure alignment to community to community information/service needs;
- Encouraging the preservation of indigenous knowledge.

Kenya

Kenya National Library Service (KNLS) was founded in April 1965 but only begun operating in 1967. KNLS has a stock of over 800,000 volumes, 25,000 of which was from the former East African Literature Bureau (possibly indicating the age of this part of the collection) Its membership totals 200, 000. Striving to fulfil its motto: **Reading Is Knowledge**, KNLS services include adult reading, children’s services, bulk lending as well as reference and referral services. Provision of the services in a widely scattered environment entails usage of all manner of transportation: camels, donkeys, motorised vehicles mobile library trucks, handcarts).

As a grantee of the Carnegie funding, Kenya received USD2,074,400.

A member of its Board (Mr Tom Sitima), at the launching of the Kenyan Carnegie project summarised the major enemies militating against the book industry (and by extension library development in general) as “poverty, ignorance, disease” (Daily Nation (Thursday, May 2, 2002, p20 Supplement). These very bluntly but articulately sum up some of the barriers to development of library services in the region. He also mentioned need for quality children’s books combating HIV /AIDS, etc.

Issues that were cited at the Official handing over of the cheque aptly sum up the state of Kenya's libraries and in the same vein enumerate some of the barriers to library development. These are quoted here:

- Lack of national policy
- Outdated legal frameworks
- Low level of ICT utilisation
- Obsolete and inadequate book stock
- Lack of skilled manpower
- A generally inadequately skilled manpower
- Inadequate infrastructure and physical facilities
- Lack of political and general awareness of need and usefulness of library services
- Need to overhaul 5 provincial libraries (Nairobi, Kisumu, Mombasa, Nyeri and Nakura)

Other Challenges that emerged

1. Piracy and disregard for copyright
2. Printing costs
3. Lack of a National Book Policy
4. Lack of intellectual property laws
5. Lack of books in indigenous languages
6. Need to promote a reading culture

What the grant is expected to do in Kenya

The grant is expected to cover the following:

- Upgrading book stock
- Staff training and development
- ICT Equipment training
- Development of Advocacy, public relations and marketing programmes
- Promote the cultivation of a reading culture
- Promote local literature
- Overhaul five provincial existing libraries

South Africa: the Situation

The public library system had been one of the best in Africa. But its service to its populace had been skewed by its political climate. It has also according to Issak (2000) detonated badly. Eight million out of 12 million learners are reported as having no access to any library facility. Significant problems are reported as being:

- Lack of funding
- Low level of awareness of the importance of libraries
- Lack of awareness by politicians as to the importance of libraries
- Low staff morale
- Lack of co-operation with other sectors
- Wastage of resources
- Need to better utilise planned and existing infrastructure
- High telecommunication and postal tariffs

The Five Grantee Library Services in South Africa are:

- The Free State Provincial Library and Information Services
- The City of Johannesburg Library and Information Services
- The Mpumalanga Provincial Library and Information Services
- Northern Cape Provincial Library and Information Services
- Nelson Mandela Metropolitan Library Services

Free State Provincial Library and Information Services

The Free State Provincial Library and Information Services was awarded obtaining a grant of approximately R5,2 million (USD650 000) from the Carnegie Corporation of New York. The funding will be made available over a period of three years. The project runs from July 2001 to June 2004.

The Free State Provincial Library and Information Services has developed a theme for the utilisation of its Carnegie funding. The theme is "Libraries for all" and the growth of a culture of reading and life-long learning. Under that banner the funding is being used among other things for the following:

- expansion of existing services,
- development of an electronic infrastructure and improvement of collections for children and adults,
- the project plans to result in improved literacy levels,
- providing holiday programmes for children and students

Mpumalanga Provincial Library and Information Services

Mpumalanga Provincial Library and Information Services launched of their Carnegie funded programme with the theme: "Building Electronic Bridges". Building Electronic Bridges will supply computers to 89 public libraries and 25 library depots in Mpumalanga and 21 computer workstations, printers and modems for a mobile library and 20 electronic book boxes in rural areas of the Western Region of Mpumalanga where there had previously been no libraries.

As well as providing these items, staff will be trained in their use, and the catalogue of all branch libraries within the system will be transferred to a machine-readable form during the next two years

Northern Cape Provincial Library and Information Services

The focus of the Northern Cape Provincial Library and Information Services is similar to that of the two the Free State and Mpumalanga though its emphasis is on the preservation material in indigenous languages.

They hope the grant will help enhance technology, and train staff to be providers of improved services due to training.

They are to embark on reading programmes, which should create awareness of the importance of reading and promote the development of a reading culture. Good educational, recreational and informational materials are being acquired to promote this development.

City of Johannesburg Library and Information Services

The City of Johannesburg Library and Information Services is focusing on reading development with the theme: "Want to Read". The project aims to reach out to children of Johannesburg who due to history were deprived of opportunities of enjoying reading and benefiting from the development of personal reading culture.

Worthwhile mentioning here is that over a four month period, April to July a remarkable number of children visited the libraries within Johannesburg for various activities and they must have been mostly school children.

It is reported that programmes started in four of the libraries from the week of 9 April i.e. the beginning of the second term. Which resulted in a total of **17 246**-child visits. They are made up of the following:

- **6093** children attended Storytelling and introduction to the library for pre-schoolers and Grades 1-3
- **1240** pre-schoolers and Grades 1-3 came for regular sessions once a week over six or seven weeks
- Reading Enrichment was attended by 633 Grades 4 and 5s regularly for seven weeks
- **108** children attended holiday programmes

Nelson Mandela Metropolitan Library Services

Nelson Mandela Metropolitan Library Services have similar project goals to the City of Johannesburg and will focus on increasing services to children and the under-served, and offering continuing professional development for staff in order to enhance the library services.

Northern Cape Provincial Library Service

The Northern Cape is using Mobile Book Boxes to reach out to school going children in need of reading material for the current South African Outcome Based Education. These boxes are targeted to very disadvantaged areas.

Other programmes for the Northern Cape include ICT development

Report to Carnegie indicated that already the forty libraries that would benefit from the installation of Internet facility have already been identified. (INASP website)

Another project there is the Reading Development Programs. This has to be quoted in its entirety to project impact:

The target group established is **toddlers, pre-primary and primary school children**. A string puppet show entitled "Wusile - the child who loves reading" has already been established. It is mobile and has been recorded on CD in English, Afrikaans, Setswana, and Xhosa. Through [in] story form the puppet show educates children on the proper care and handling of books and also the importance of libraries and reading. In order to nurture a reading culture in this province the responsibility attached to reading has to be emphasised due to the fact that in rural areas a reading culture is almost non-existent. The puppet show will go on tour in the Province during April and May 2002. The areas chosen are those where the Mobile Book Boxes have been implemented. In order to reach larger numbers the Puppet show is in the process of being recorded on Video in Afrikaans, Setswana and Xhosa. The English recording is already been done. Copies of this will be distributed to all libraries for internal programs. This is not for sale to libraries.
(Report to Carnegie INASP WEB SITE)

Workshops

All the grantees have mounted or would be mounting workshops to enhance staff skills.

1. Botswana and Kenya had both run Monitoring and Evaluation workshops. They were fully Carnegie sponsored they were facilitated by Book AID through INASP. They also had workshops that addressed Advocacy and Lobbying. In either case an officer from the other country was invited as facilitator.
2. In Botswana the Botswana Library Association (BLA) in conjunction with INASP organised a *Workshop on Continuing Education: Proactive Library Services for Children, Young People, People with Special Needs and for Adult Basic Education*. The participants included school librarians as well as public special and academic librarians.
3. Six librarians were invited to attend the Strategic Communications Workshop 15 — 18 July 2002, Dar-Es-Salaam, Tanzania.
4. Johannesburg libraries had workshops for Collection development. It produced a list of core books on which orders can be based. The Carnegie project staff are said to have been attending regular and frequent talks on matters relating to reading development and book selection.
5. The Nelson Mandela Public library Services indicated that local specialists would conduct workshops for library staff on topics like storytelling. A promotion is being mounted to address children's services. Its target is three fold: the children themselves (particularly younger children), teachers and parents or caregivers. Contacts will be made with pre-schools and primary schools, and programmes for all three-target groups will be held in the library.

6. The Northern Cape Provincial Library service has been training staff and organising day workshops to strengthen staff capacity. The Northern Cape staff identified the need for a database of training professionals is needed to assist with this process. Some of the requested training needs are being highlighted here, as they will contribute to impacting pupils directly.
- Computer Literacy,
 - Children programs (puppet shows, story hours),
 - Toy Library,
 - Presenting Literacy classes, Library advocacy, Information Retrieval.

Public Libraries / School Libraries Teamwork

Discussing the issue of Sister Schools, a White House Millennium Project, between public and school libraries in the United States and public and school libraries in other parts of the world a spokesman is reported as saying "Public and school libraries are essential to democratic ideas and freedom of expression. Libraries are local gateways to knowledge, fostering conditions for lifelong learning and cultural development for all, thus strengthening our diverse communities." (<http://www.nclis.gov/millennium/descript.html>) Public Libraries give many people opportunities for advancement. Where there are no school libraries it is imperative that public libraries take over as much of the role that school libraries would play as possible. For the bridging of the divide libraries and resource centres are the best choice because their very nature makes them the most democratic institutions in the world.

Programmes and Their Possible Effect on School Libraries

It was a pleasant surprise to find out that some of the programmes, which grantee libraries are embarking on or hope to embark on actually target school pupils and other programmes are substitutes for school library provision. A few are highlighted here:

The South African libraries in particular are targeting school pupils:

- The Free State Libraries are providing holiday reading programmes for primary school children and students.
- The Nelson Mandela Library Services have indicated that local specialists would conduct workshops for library staff on topics like storytelling. So that they can effectively mount story telling sessions for their users. Mostly school pupils will attend story-telling sessions.
- They are also mounting a programme targeting the promotion of the library to the children, teachers and parents or caregivers. They hope to make contacts with pre-schools and primary schools to expose them to libraries.
- Botswana, Kenya and South Africa all hope to establish Internet access facilities for users. This should definitely impact schools. The Carnegie Revitalisation programme does not target school libraries but in the public libraries
- They open to every one, every day including weekends and disregard season, (winter or summer they remain open: the freezing primary school pupil should not only find material to read in his language at his level but also have the bonus of a warm and welcoming environment in which to read in the library, should also be able to open up a whole new world to the information thirsty and seeking pupil and bring the world to their community (with books about other worlds, maps, Internet access, e-mail facility, etc.)
- The Northern Cape is using Mobile Book Boxes to reach out very disadvantaged areas' school going children in need of reading material for the current South African Outcome Based Education. These boxes are targeted to
- Other programmes for the Northern Cape include ICT development, in the libraries for all users
- The Reading Development Programs also in the Northern Cape would for the most part be school programmes.

What Could Grantee Libraries Do to Extend Carnegie Benefits to Disadvantaged Schools?

Allow me to dream for the grantee public libraries:

- School in a web project should be networked with grantee public libraries to get the benefit of access to all the holdings of the public library
- Programmes should be drawn in rotation order for disadvantaged pupils to be given every opportunity to muster basic information literacy skills
- They should in conjunction with Senior Schools and Universities around them draw up exposure programmes aimed at de-mystifying the idea of libraries as elitists edifices. They should on rotation basis get every school pupil in schools within a reasonable radius to visit and be exposed to how the libraries work. enjoy handling and reading aloud out of beautifully illustrated children's books.

Bulk lending should be available to every school without libraries, a case of if the mountain is not with Mohammed let Mohammed go to the mountain!

Conclusion

In line with the vision of its founder the Carnegie Corporation's award of several millions of dollars to the grantee libraries discussed here should make indelible imprints on the lives within the communities being served by the grantee libraries. The future of any nation is its children. If they could be exposed, informed and educated a little better than their economic and social circumstances currently destine them for, Carnegie 's dream of enabling man to "erect the structure of an enduring civilisation" would have come a little closer to being realised.

Notes

Useful web sites:

<http://www.school.za/>

<http://www.kzn.school.za/>

<http://www.nclis.gov/millennium/descript.html>

<http://www.ntia.doc.gov/opadhome/digitalnation/index.html>

References

Baffour-Awuah, Margaret & Baruti Tumisang (2000). *A Revitalised Public Library System as an Effective Support to Secondary School Pupils in the Revitalised Public Library*. Gaborone: National Library Service

Baffour-Awuah, M & Gaolebogwe, M. (eds.) (2000). *Proceedings of the National Library Service Carnegie Sponsored Stakeholders Consultative Seminar on the Revitalisation of the Public Library system in Botswana*. Gabarone: National Library Service

Baffour-Awuah, Margaret & Kalantle T (1996). *Report of visit to Education Institutions in the Bobirwa District from 24th July to 4th August 1995*. Gaborone: Botswana National Library Service

Batambuze, Charles (2003). Uganda: *The Journey towards a School Library Policy* - Extracts from a report by Charles Batambuze, General Secretary, Uganda Library. Retrieved from www.iasl-slo.org/happenings-archive2003a.html

Dike, V. (1993). *Library Resources in Education*. Enugu: ABC

Gatheru, Claire (2002). KNLS Given Over SH161 Million in *Daily Nation Supplement*, Thursday May 2, 2002.p20.

IFLA / ALP (2002). Project Report no 20. *Information and Communication Technologies in Rural Secondary Schools in Africa*. Proceedings of the Workshop29/ 11/-3/12 1999, Bronte Hotel, Harare, Zimbabwe, Edited by Chiware Elisha, R.J.

Issak, Aissa (ed.) (2000). *Public Libraries in Africa*. Oxford: International Network for the Availability of Scientific Publications (INASP)

Mbambo, Buhle (1999). Information and Communications Technologies as Change Agents in Education: Special Reference to Rural Schools in Africa. In Chiware Elisha, R.J. (ed) *Information and Communication Technologies in Rural Secondary Schools in Africa*. Proceedings of the Workshop29/ 11/-3/12 1999, Bronte Hotel, Harare, Zimbabwe, IFLA / ALP (2002) Project Report no 20. pp 29 – 34.

Overduin, P J. (1991). 'Republic of South Africa: In J. Lowrie and M. Nagakura (Eds) *School Libraries, International Developments*, 2nd ed. London: Scarecrow Press, pp149 – 160.

Tötemeyer, A. J (1996). A Legacy of the Past: The State of School Libraries in Namibia. In L. Anne Clyde (ed.) *Sustaining the Vision: A Collection of Articles and Research in School librarianship*. Sustaining the Vision: A CollCastle Rock: Hi Willow Research and Publishing, pp77 - 86

Information Literacy Education in Nigeria: Breaking Down Barriers Through Local Resources**Virginia W. Dike**Head of the Department of Library and Information Science
University of Nigeria
and**Ogo N. Amucheazi**Deputy University Librarian
University of Nigeria

This paper explores the prospects of information literacy education in Nigerian primary schools. It is argued that while information literacy is essential for attaining the objectives of Nigerian education, a number of barriers stand in the way. These include the learning environment, lack of resources, language and literacy problems, and teacher orientation and teaching practice. The information literacy project described in this paper is attempting to break down the barriers through innovative use of available local resources.

Information literacy is a concept that has received increasing emphasis in recent times. Defined by Doyle (1994) as the ability to access, evaluate and use information from a variety of sources, information literacy is an expanded form of the library and learning to learn skills emphasized by educational reform movements from the 1960s. Information Power (ALA, 1998) makes the connection explicit by stating that information literate people are those who have learned how to learn. The concept of information literacy evolved in response to new developments. It encompasses a whole range of literacies associated with various sources of information-- basic literacy, visual literacy, Internet literacy. Increasingly also, information sources may be located beyond the library, in the community or accessed through information and communications technologies. The resulting information and technologically rich environment focused increasing attention on the thinking skills required for learning from information (Moore, 2002). Kuhlthau (1995, p. 2) has termed the process of learning from information the "key concept for the school library media center in the information age school."

How do these ideas relate to a country like Nigeria, which does not offer an information and technologically rich environment? Is information literacy for Nigerian school children as well? Can information literacy be taught in primary schools that are information poor, schools that lack the libraries, technology and information resources supporting education elsewhere? If so, how can this be accomplished? These questions are the focus of the project described in this paper.

Looking at the literature, we noted that while much of the international literature on information literacy assumes information and technologically rich environments, information literacy does not depend on this. Moore (2000, p. 14) cautions that "the 'information' in information literacy is not restricted to print or digital media". Hart (2000, p. 4) quotes Eisenberg's agreement that "in under-resourced situations students still need to solve information problems." Over twenty years ago, Irving (1981, p. 4) framed her international study on information literacy to include schoolchildren without access to school libraries, because they also need to seek out and use information. Taking a similar approach, the syllabus for basic information science in Namibia (1991) utilizes environmental and human resources as well as library resources for information literacy education. Moore (2002) likewise affirms that information literacy can be introduced wherever communities exist. We therefore resolved to take up the challenge in the context of Nigerian primary schools in our area, Nsukka. We turn now to a consideration of the Nigerian context.

The Nigerian Context

Policy

Nigeria, like many other nations of the world, was affected by the push for educational reform in the second half of the twentieth century. New ideas about how children learn, coupled with the rapid pace of change raised questions about common educational practice. The attainment of independence in 1960 also gave rise to pressure for educational change to meet national aspirations. It was recognized that education in the modern world must be self-directed and lifelong, equipping individuals to meet new needs and adapt to changing circumstances. Nigeria's education policy statements reveal a close affinity with the ideas associated with information literacy and the educational reform movement.

The National Policy on Education, brought out in 1977 and revised in 1981 and 1998, articulated the new vision and objectives, describing education as learner-centered, self-directed and lifelong (Nigeria, 1998). The Policy further declares that laying "a sound basis for scientific and reflective thinking" is a major goal of primary education (Nigeria, 1998, p. 13) and that teaching in primary schools "shall be by practical, exploratory and experimental methods" (Nigeria, 1998, p. 14). It also recognizes school libraries as "one of the most important educational services" (Nigeria, 1998, p. 40), which are to be provided in all schools, and implies a central role for libraries in education.

In 1987-1988, the National Primary Education Commission, under the auspices of the Implementation Committee for the National Policy on Education, prepared Primary School Curriculum Modules for grades 1 to 6. The aim was to guide teachers in realizing the educational objectives of the National Policy. The Introduction argues forcefully for a change from passive rote learning to active participatory learning, stating that the modules' learning activities "involve pupils in the quest for knowledge, thus participating actively in their own education." Modular instruction, according to the Introduction, "encourages pupils to search for knowledge, thereby making use of the library and cultivating extensive reading habits" (Nigeria, 1989, p. v).

The Implementation Guidelines for the Universal Basic Education Programme (UBE), continue this emphasis, stating that the broad aim of basic education is to "lay the foundation for life-long learning through the inculcation of appropriate learning to learn, self-awareness, citizenship and life skills" (Nigeria, 2000, p. 3). It can be seen from these documents that information literacy education is intrinsic to the realization of Nigeria's educational objectives.

Reality

In spite of this supportive educational philosophy, the reality of Nigerian primary schools precludes easy implementation of information literacy education. There are numerous barriers to be broken down. These include the following:

An impoverished learning environment. School buildings are run-down and shabby. Most classes are held in long halls rather than in separate classrooms. The environment is dark and distracting, with inadequate furniture and workspace, barren walls, and few resources for teaching and learning. Security is a problem militating against resource development in many schools. All these are barriers to learner-centered, collaborative, resource-based and active learning.

Lack of learning resources. Few primary schools have libraries. The 'library' is likely to be a cupboard of textbooks, with a few teachers' guides and charts provided by government agencies. There is no designated fund for building up the school library. As a result, schools lack the variety of information resources required for information literacy.

On the societal level, learning resources are scanty due to the poorly developed publishing and book trade, doubts about the cost effectiveness of producing children's books, the lack of public libraries and book shops offering varied fare, the high cost of books relative to income and priorities. There are few children's books, especially in such categories as picture books, topic books, reference books, and books in Nigerian languages. Children, therefore, lack appropriate information resources and find it difficult to develop the reading skills needed to access information from written sources.

Language and literacy. Language poses a major barrier to children's learning. Nigerian children learn to speak the mother tongue in their early years but face an unfamiliar language, English, when they go to school. By policy children are supposed to be taught in the language of the community for the first three years and change to English, which has been taught as a subject in primary 1-3, in the senior primary classes. However, few Nigerian children have attained sufficient mastery of English to use it for learning. Due to various factors - lack of teachers who are fluent in English, lack of opportunities for English conversation, lack of reading materials - many children never master the second language. This cuts them off from written information resources, which are primarily in English, assuming they are available. Children also fail to attain literacy in their mother tongue. In the end, many children fail to learn.

Teacher orientation and teaching practice. Primary school teachers have been trained in traditional teacher-centered methods. Many are poorly educated and insecure. The educational system stresses covering the syllabus and passing exams, and rote learning rather than problem solving and inquiry. The situation is well described in the Introduction of the National Policy on Education explaining the rationale behind the Curriculum Modules:

However, vestiges of the old system of teaching and evaluation still prevail in most schools. Most teachers still conceive their task as feeding young minds with facts which are often ill-digested by the pupils. Learning is still a receptive and submissive acceptance of knowledge. It constitutes a load to the memory instead of a light to the mind. Pupils are not encouraged to have original ideas or to be creative. Conformity and convergent thinking is still at a premium while adventurous thinking is either penalized or, at best, ignored. (Nigeria, 1989, p. iv).

The challenge is to find ways of breaking down these barriers to information literacy. Within the given environment and circumstances, how can children become information literate? How will they gain access to the information resources needed for learning how to learn? What strategies can be employed in information literacy education? How can schools develop libraries and collections of information resources? The researchers tried to find a way in this project.

The Project

The schools

Primary education in Nigeria is the first six years of public schooling, with pupils from about six to twelve years. Educational policy is set at the national level under the Ministry of Education and the Universal Basic Education Programme, formerly the National Primary Education Commission. The second tier is made up of the State Primary Education Boards, which supervise education at state level, while local public schools are under the Local Government Education Authorities.

The five schools in this project were selected in consultation with supervisory staff of the Nsukka Local Government Education Authority, who also participated in the project. Staff involved include the Deputy Director Education, the Head of the Inspectorate Section, and the two Library Supervisors. Schools selected had Head Teachers who had shown some initiative in developing school library facilities and interest in innovative practices. They include the following:

1. *Community Primary School, Opi-Uno*, is a rural school of 8 teachers and 160 pupils located in a community just off the junction of the major highway and the road to Nsukka town. The Parent Teacher Association (PTA) is buying books for a library.
2. *Community Primary School, Umuhu, Umabor, Eha-Alumona* is a large rural school (16 teachers, 335 pupils) in a peaceful and well-kept compound with mango trees. A large furnished room in a three-classroom block, currently under repair, built by the PTA with later assistance from SPEB, has been designated as the library.
3. *Central School, Ede-Oballa*, with a population of 19 teachers and 484 pupils, is on the road linking Nsukka to the main highway at Opi Junction. It was chosen for the project because it is one of five UNICEF experimental schools in the area.

4. *Hilltop Primary School, Ajuona, Obimo*, sits on top of a hill some distance off the paved road leading to the rice-growing region of the state. The school, with only 9 teachers for a population of 466 pupils, was selected because the PTA built a school library, which was commissioned with great ceremony in April, 2002. The library is a small, well-furnished room with a varied collection. However, there is little evidence of use.
5. *Model Primary School I, Nsukka*, an urban school with a population of 25 teachers and 762 pupils, was selected as one of two focus schools in Nsukka Local Government Area for the UBE/World Bank classroom library project. The school occupies a brick storied building in the center of town and is considered a model. One room of a three-classroom block under construction has been allocated as the library, but presently the library operates out of a cupboard in the head teacher's office two days a week.

The first step in the project was visiting the schools and interviewing the head teachers and teacher-librarians. In this way we hoped to identify the information resources available for the project and the readiness of the staff to participate.

Available information resources

As anticipated, we found very few information resources in the schools. The primary resources were textbooks, in particular textbooks in core subjects – English, mathematics, science and social studies – developed through a World Bank-assisted project. Teacher-librarians served primarily as storekeepers for these texts, loaning them out to classes and collecting them back on a daily basis. Available learning materials included other textbooks, teachers' guides, juvenile fiction, charts and maps supplied by government agencies. One school had built up a collection of juvenile fiction by asking each new pupil to supply one book, while another had received fiction titles from the State Primary Education Board (SPEB).

When we asked about assignments or projects for developing information skills, we were shown pupil-generated drawings, charts and models. Most of these were purely illustrative. Two schools had participated in a competition organized by the Junior Engineers, Technologists and Scientists (JETS). The head teacher at Eha-Alumona described how one pupil built a model airplane and figured out the mechanism for making it fly.

Very little use had been made of resources in the community, although their potential use was appreciated. Fears were expressed about being caught deviating from the timetable and lacking the time to go on field trips. There was anxiety about covering the curriculum, which was seen in terms of factual content.

School library facilities

The schools had been selected because of some tentative moves to develop a school library. However, this does not mean that the schools had functioning libraries that could support information literacy. In terms of accommodation, two schools had classroom-size rooms that had been allocated as the library, although neither was presently in use; two had small rooms the size of an office; and one anticipated using a similar space. The so-called libraries were actually cupboards stocked with multiple copies of textbooks and, in some cases, storybooks. There was some recognition of the role of the library in encouraging reading.

Most of the schools had classroom reading corners and nature corners. The reading corner was typically a basket with a few books which pupils could read when they had finished an assignment.

Teacher-librarians

All the schools had a teacher assigned responsibility for the library. Four of them were regular classroom teachers who had little time for their library duties. The fifth was the specialist science teacher at Model I, who was better able to combine the two assignments, loaning books to pupils two days a week and going from class to class for library activities.

The teacher-librarians were all well qualified teachers, three holding bachelors degree and one the National Certificate in Education (NCE), a 3-year post-secondary course. None had any qualification in school librarianship. One had taken a school library course in his undergraduate education program. Two had participated in a two-week workshop, while one had visited the Children's Centre Library at the University of Nigeria for instruction. The fifth had a use of the library course, which is required in the NCE program.

The conclusion we drew was that the teacher-librarians and teachers had about the same level of preparation for the project and that any school-based leadership would probably come from the head teachers.

Information literacy education

The next step was identifying which skills would be the focus of the information literacy project, examining the curriculum, developing modules, and holding a workshop to introduce the concept of information literacy to the teachers. We focused on the following areas.

1. Reading and other literacy and language skills

Basic literacy gives access to information in written sources and provides a way of communicating information to others. Information literacy has been described by Kuhlthau as "the extension of basic reading, writing and calculating skills for application in information and technologically rich environments for the purpose of learning or solving problems." (Moore, 2002, p. 1). It is also the first goal listed for Nigerian primary education, which seeks to "inculcate permanent literacy, numeracy and ability to communicate effectively" (Nigeria, 1998, p. 13). However, in the Nigerian context delineated above, basic literacy and the ability to communicate effectively cannot be assumed. The project, therefore, aimed at developing reading and writing skills by integrating information skills and subject content in science and social studies with the English language curriculum.

However, reading is not the only form of literacy required for processing information. We identify with the observation of Oberg (2001, p. ii) that: "Literacy is often defined in terms of reading and writing; it is less often defined in terms of listening and viewing or speaking and image-making." Certainly in the Nigerian context due attention needs to be paid to listening and speaking as communication skills and ways of receiving and giving information. These information skills have special significance in an environment "where print resources are limited and literacy itself is fragile" (Moore, 2002, p. 4), an apt description of the Nigerian primary school. Moreover, many of the information resources available in the community are accessed through oral communication, as is set forth in the Namibian syllabus for information science (Namibia, 1991, p. 8).

In line with Oberg's observation, we also turned attention to visual literacy, the ability to 'read' visual sources of information. This could be applied, to not only to pictures, charts and other visual resources in the library, but also to community resources and the natural world. Observation skills help pupils obtain information about animals, plants, hills and other geographic features, markets, occupations and crafts, institutions like banks and health centres, etc. This is acknowledged by the Curriculum Modules, which aim at "encouraging pupils to use their eyes and ears to observe things" (Nigeria, 1989). Likewise, skills in drawing and other arts enable pupils to communicate visual information to others.

2. Thinking skills and information-handling skills

Another area of emphasis was thinking skills. The National Policy aims at "inculcating the spirit of enquiry and creativity", "laying a sound basis for scientific and reflective thinking", and "rais(ing) a generation of people who can think for themselves" (Nigeria, 1998, p. 11, 13, 17). The Notes for using the Curriculum Modules exhort teachers to "provoke (pupils) to think (for themselves)" (Nigeria, 1989, p. xiii). It is therefore sad that teacher attitudes often kill rather than encourage thinking.

Critical thinking skills are essential to the development of information literacy. They are needed for deciding what information is needed and for what purpose, how to evaluate information for reliability and relevance, how to fit the pieces together, what conclusions can be drawn, and how the information can be used to solve a problem. Several authors have emphasized the importance of processing information (Herring, 1997; Kuhlthau, 1995; Garland, 1995) and noted the tendency to jump from location to production, a tendency we also found in this project. We used Marland's 10 questions as a guide for information problem-solving, first because pupils and teachers found the question format more approachable and, secondly, because in our judgment the questions clarified the thinking skills required for using information.

Strategies for Breaking Down the Barriers to Information Literacy Education

Use of community resources

Information literacy lays the foundation for lifelong learning. However, the skills cannot be developed without a variety of information resources. Children become information literate through participating in projects and activities that involve the use of resources. The five project schools in Nsukka lack conventional learning resources such as should be found in a school library but are very rich in out-of-school resources found in their immediate communities. Some of these resources include those that can be adapted from the pool of rich indigenous knowledge systems and used to enrich the curriculum in such areas as cultural activities, language and literature, social studies and knowledge of the environment (Dike and Amucheazi, 1997).

Information resources within the local community include the natural world, institutions and place, and people. In the natural world, children can get a wealth of information and develop information literacy through careful observation of natural phenomena like the vegetation and contour of the locality, birds and other animals, plants and trees, etc. Information skills can also be developed through visits or excursions to places like the bank, market, health centre, festival, craft centre, etc. Again, children get information by observing what is going on, asking questions, and recording the information in their journals.

For over seven years the second presenter (Amucheazi) has used her undergraduate and postgraduate courses in rural library and information services, oral information, and humanities literature for students to go into the rural areas and collect/capture useful information. This is recorded on cassette tapes and in photographs. Elaturoti (1986) developed similar resources at the Abadina Media Resource Centre. These projects confirm that each community has many people such as elderly men and women, parents and relations, village heads, with a wealth of information on local history, oral literature, medicinal use of plants, food processing, indigenous technology and many types of occupations. By interviewing such people, children can also develop listening and communication skills.

Teachers in the five project schools were able to identify a number of relevant community resources for developing information literacy and supporting the curriculum. These include the following, all of which had at least two responses:

	Number of schools responding
Natural phenomena	
Streams, springs and lakes	5
Hills and valleys	4
Forests	3
Plants	5
Animals	4
Orchards/farms/plantations	2
Institutions or places	
Banks	2
Churches	4
Health centres/hospitals	5
Markets	5
Postal agency	4
Schools	2
Resource persons	
Blacksmith	5
Masons	3
Carpenters	3
Farmers	3
Teachers	2
Wine tappers	2
Herbalists	2
Parents	2

Modules for information literacy education using community resources

Using insights from earlier projects, the researchers developed modules for information literacy education in primary 3-6. The first two modules developed were on birds (for classes 3 and 4) and occupations (for classes 5 and 6).

Module on Birds. The discovery module on birds focused on learning through observation of the natural world. The objectives were to familiarize children with their environment, develop habits of careful observation, and stimulate inquiry about the natural world. The module was designed to both develop information skills and reinforce content across the curriculum, in topics such as measurement, colours, domestic and farm birds, changes in nature, natural resources. It was also seen as a way of developing language and literacy skills.

Pupils were guided in their observations by introductory information on birds, including a diagram labeling parts of the body, guidelines on how to look at birds (in terms in size, colour, shape, behaviour) and an observational checklist. The children were asked to keep a journal of their observations and report back to class. The pupils were able to identify over 10 common birds, including the weaver bird, bulbul, kingfisher, crow, vulture, kite, coucal, dove, hornbill, egret, sunbird, eagle and owl. Information was shared, evaluated and supplemented by classmates and by reference materials brought by the researchers from a children’s library on the university campus. Small groups then composed a written description and drawing of each bird to create an information resource, in the form of a big book, album or set of study cards.

Module on occupations. The module on occupations is part of the social studies curriculum for primary 4, 5 and 6 and provided opportunities for developing the pupils information and learning skills to “develop the practice of self-learning” (Nigeria, 1998, p. 9). The topic is designed to help the pupils plan the information-seeking process, gather information using interviews with local workers, and create information resources on local occupations. It was envisaged that the interview process would develop listening and communication skills while the creation of information

resources would develop writing skills. The objectives of the module include familiarizing pupils with the occupations practiced in the community, thereby fostering respect for individuals and the dignity of labour.

The pupils were asked to go and interview people in different occupations using a set of interview questions they had developed. These covered such areas as the nature of the work, length of preparatory training, equipment and materials needed, staff required, organization of the occupation, problems entailed in doing the work, what they like or dislike about the work, their degree of job satisfaction and monetary reward. Many pupils interviewed farmers, masons, herbalists, traders, nurses, teachers, hair-dressers, barbers, palm-wine tappers, basket makers, poultry keepers, carvers, etc. They took brief notes and clipped some pictures or drew people at work in various occupations.

From the experience with these two modules, additional ones were developed in consultation with the teachers. For instance, markets offer many opportunities for information literacy education across the curriculum, in social studies, home economics, agricultural science, mathematics, language arts. Pupils explore such problems as the types and sources of market goods, organization and management of the market, the occupations practiced there, the cost and availability of items throughout the year and implications of this for consumers. Another major curricular concern with abundant local information resources is the environment, with such topics as landscaping, pollution, soil erosion, waste management, care and use of natural resources, plants and their uses.

Resource generation

Using information gathered through observation and interview, children can create resources for teaching and learning. In the process, they develop skills in organizing and presenting information and basic reading and writing skills. The materials also provide reading materials for other pupils, thereby developing their reading skills. Thirdly, such materials provide a wealth of local information and help build up the school library collection. This is an aim of the Namibia Syllabus (1991, p. 2), i.e., to “generate information sources from human and environmental sources as well as the mass media which can form the nucleus of a resource center or add to the stock of an existing resource centre/school library.” Crocker (1986) adopted a similar approach with a class project involving development of a vertical file collection. Again, the project had the dual purpose of developing the students’ information literacy and creating an information resource for the school library.

Reading skills are basic to information literacy, yet reading materials are often in short supply. One project by the presenters involved the creation of reading materials from local resources as children recorded folktales on tape and created books in the local language. The research team then created reading materials in simple English. Creating books themselves also predisposes children to books and reading by making them feel confident and comfortable with books. The researchers also saw the need for information books based on the local environment. We have therefore also created books on birds, trees and plants and seasons, all with the aim of familiarizing children with their environment, stimulating inquiry about the natural world, and providing resources for information literacy education.

Developing school libraries

While community resources are useful and relevant for information literacy education, they are not all sufficient. A well-stocked school library introduces children to a greater variety of resources and a wider range of information. Like Zinn (2000), we found the lack of necessary materials a major barrier to implementing self-directed learning and certain information skills. How, then, can schools like those in this project develop school libraries in support of information literacy?

The government through its agencies, the Petroleum Trust Fund (PTF), the Education Trust Fund (ETF), SPEBs and UBE, and international agencies such as UNESCO, UNICEF, and the World Bank, have been providing learning materials, particularly textbooks, charts, exercise books, and supplementary reading materials to primary schools. However, most of these resources are not very useful for developing school libraries. The UBE/World Bank classroom libraries project involving 1,100 focus schools, including one of our project schools, will provide the type of collection, made up of information books, reference books, picture books and fiction, that primary schools need for information literacy.

School libraries can also be built up through local sources. Newspapers and magazines can be clipped, old calendars can be used to develop a picture collection, and other ways found to recycle materials from homes and other places in the community. Another aspect of this project is asking schools to look within their communities for school library development. The PTA of three project schools have helped by contributing books and building library blocks with basic furniture.

Regional resource centres can also help through revolving loans sent through portable or mobile libraries. In this area the Children's Centre Library of the University of Nigeria sends books and other materials on loan to institutional members. This acquaints teachers with the kinds of materials in a school library and the use that can be made of them as well as providing a varied if small collection.

Evaluation and conclusions

While the project is still in the early stages, it is possible to evaluate the progress so far and reach certain conclusions concerning information literacy education in Nigerian primary schools. These include the following.

1. There are numerous opportunities for information literacy education to be developed across the primary school curriculum. Both the philosophy of the National Policy and suggestions of the Curriculum Modules support inquiry and problem solving. There are also sufficient information resources within the communities to initiate information literacy education, despite the scarcity of conventional written information resources.
2. The greatest barrier to learning in general and information literacy in particular is insufficient language and communication skills. Most children lack sufficient mastery of English language to be able to think and learn in it. For instance, pupils in primary 5 and 6 interviewed people practicing various occupations, but many were unable to write down what they did and report the responses of those they interviewed. Some could not report orally in English and so were allowed to use their local language, Igbo.
3. On the other hand, the modules offer an effective strategy for improving language and writing skills, a point also emphasized by Hart (2000). Through questions in an interview schedule or observation checklist, pupils can be guided in what to ask or look for. Through conversation, children can be encouraged to refine and expand their descriptions, finding the right words to express what they saw or communicate the responses of people they interviewed.
4. These benefits can accrue if children are encouraged to express themselves in a friendly, lively, non-threatening atmosphere. In some cases, teachers, perhaps embarrassed by what they saw as a poor performance, prodded and intimidated pupils. When pupils hesitated, teachers quickly reverted to drill and chorusing, taking over the lesson. This points up the need for reorientation and retraining of teachers.
5. There was an overemphasis on the product rather than the process, on content mastery rather than skills development. Some teachers and pupils understood the aim of the activity as producing a picture of a bird, for instance, rather than a process of observing birds and recording observations as a way of learning about birds and learning how to learn. As with their earlier assignments, many were merely pictorial with no text. In some cases, pupils relied on an older sibling or the teacher to complete the assignment. This can be attributed to concern over the product rather than the learning process.
6. For some activities, like that on birds, pupils and teachers needed written materials, such as guides, to provide additional information and help evaluate information gained through observation. This, again, pointed up the need for a well-equipped school library. Without these resources, birds were misidentified and factual errors went uncorrected.

Recommendations

The following are recommendations based on the initial phase of the project.

1. Information literacy will be more successful if it is built into the school curriculum.
2. Teachers, including head teachers and teacher-librarians, and education supervisors need in-service training and guidance, preferably in the context of the classroom, if information literacy education is to be successfully implemented.
3. Because everyone learns and thinks best in his or her own language, children should learn how to learn in the language they know, which in this case is spoken Igbo. This will enable them to develop information skills and master content.
4. At the same time, information literacy education has to go hand in hand with mastery of the language of instruction, English. Otherwise, Nigerian children will have very limited access to information.
5. In addition to use of community resources, authors, publishers, government and other agencies need to produce information books of high quality and relevant to Nigerian environment and culture.
6. Efforts need to be intensified to develop school libraries to support information literacy education and resource-based education in Nigerian primary schools. To this end, government and its educational agencies need to establish a system for providing school library funding and relevant learning materials on a regular basis.
7. Finally, information literacy is acquired gradually. Any program for information literacy education, therefore, requires clear vision, continuous evaluation, sustained effort, and patience. With these, we are confident it will be possible to break down the barriers standing between schoolchildren and information literacy in Nigeria.

References

- American Library Association & Association for Educational Communications and Technology (1998). *Information power: Building partnerships for learning*. Chicago, IL: ALA.
- Bruce, Christine (1999). *Information literacy: An international review of programs and research*. Paper presented at the LIANZA Conference, Auckland.
- Crocker, Margaret (1986). The vertical file: A class project – a library resource. In *The school library – window on the world*. Proceedings of the 15th Annual Conference of the International Association of School Librarianship, Halifax, Nova Scotia, Canada, (pp. 224-236).
- Dike, Virginia W. & Amucheazi, Nancy (1997). Information for all: Resource generation and information repackaging in Nigerian schools. In L. Lighthall & K. Haycock (Eds.), *Information rich but knowledge poor? Emerging issues for schools and libraries worldwide*. (pp. 245-254). Seattle, WA: IASL.
- Doyle, Christina (1994). *Information literacy in an information society: A concept for the information age*. Syracuse, NY: ERIC.
- Elaturoti, David F. (1986). Use of resource people in generating resources for learning in Nigerian schools. In *The school library – window on the world*. Proceedings of the 15th Annual Conference of the International Association of School Librarianship, Halifax, Nova Scotia, Canada (pp. 169-174).
- Garland, Kathleen (1995). The information search process: A study of elements associated with meaningful research tasks. *School libraries worldwide* 1(1), 41-53.

Hart, Genevieve (2000). *Project work as a vehicle for information literacy education in a Circuit of South African primary schools*. Paper presented at the 66th IFLA Council and General Conference, Jerusalem, Israel.

Herring, James E. (1997). *Information skills: the PLUS approach – A view from the UK*. Paper presented at the 63rd IFLA General Conference, Copenhagen, Denmark.

Irving, Ann (1981). *Instructional materials for developing information concepts and information-handling skills in schoolchildren – an international survey*. Edited by Ann Irving for the General Information Programme and UNISIST. Paris: UNESCO.

Kuhlthau, Carol C. (1995). The process of learning from information. *School Libraries Worldwide* 1(1),1-12.

Marland, M., ed. (1981). *Information skills in the secondary curriculum*. London: Methuen.

Moore, Penny (2002). *An analysis of information literacy education worldwide*. White Paper prepared for UNESCO, the U.S. Commission on Libraries and Information Science, and the National Forum on Information Literacy, for use at the Information Literacy Meeting of Experts, Prague, The Czech Republic.

Namibia. Ministry of Education, Culture, Youth and Sport (1991). *Syllabus (Junior secondary phase): Basic information science*. Windhoek: The Ministry.

Nigeria (1998). *National policy on education*. 3rd ed. Abuja: NERDC.

Nigeria (2000). *Implementation guidelines for the Universal Basic Education (UBE) Programme*. Abuja: Federal Ministry of Education.

Nigeria. National Primary Education Commission (1989). *Primary school curriculum modules*. Lagos: Evans, for National Implementation Committee on National Policy on Education.

Oberg, Dianne (2001). Editorial: Perspectives on information literacy. *School Libraries Worldwide* 7(1), i-v.

Zinn, Sandy (2000). Information literacy and outcomes-based education in South Africa. In the 21st century: The challenges of disparities. In E. Howe (Ed.), *Information Literacy: Key to the future. Papers presented at the 29th Annual Conference of the International Association of School Librarianship*. (pp.217-226). Seattle, WA: IASL.

Biographical Notes

Dr. Ogo Nancy Amucheazi is a Deputy University Librarian at the University of Nigeria and part-time lecturer in the Department of Library and Information Science. Her areas of specialization include oral information, rural information services and humanities literature. She has served as a Consultant for UNESCO and the World Bank Assisted Book Programme for Nigerian schools and been active in founding the Children's Centre Library.

Virginia W. Dike is Head of the Department of Library and Information Science, University of Nigeria and President of the Nigerian School Library Association. Her areas of specialization include school libraries, children's services, and audiovisual resources. She is a co-founder of the Children's Centre Library at the university and has participated actively in IFLA, IASL and the UBE/World Bank Assisted primary schools project.

IL Alliances: University Library and High School Libraries Working Together for Life-long Learning

**Verna George
Paulette Kerr**

University of the West Indies

Informal observation by University of the West Indies (UWI) Mona librarians and anecdotal evidence from UWI faculty suggested that information literacy skills among students at the UWI Mona are inadequate for university level. Results of an informal survey of IL in select high school libraries in Jamaica indicated school IL programmes were not preparing students adequately. Therefore, the authors propose forging alliances between the University Mona Library and high school libraries to improve IL programmes in the high schools. The paper draws on three recent successful cases of collaboration between the UWI Mona library and high schools. It ends with some recommendations.

Since 2001, incoming students at the University of the West Indies (UWI) at Mona¹ have been exposed to information literacy (IL) skills through programmes run by the Library's teaching section, the Mona Information Literacy Unit (MILU). However, even after such exposure, students' retention and application of these skills seem to be very low, an assessment based on informal observation by librarians at the reference desk and in the catalogue hall, and on anecdotal evidence from lecturers on students' information literacy skills.

Supporting evidence came from informal research carried out among the students themselves. Approximately 400 new undergraduates completed a short questionnaire during the Library's component of the University's 2001 and 2002 orientation sessions. Analysis of a haphazard sample of 253 of these questionnaires indicated freshmen's limited exposure to the information-finding tools used at the university level. Few respondents said they knew how to search a card (35%) or online (15%) catalogue, or used search engines to find information (41%).² While these findings do not necessarily constitute a measure of students' IL competencies, they do point to the size of the gap that needs to be closed at the university level.

Recognising the needs of university undergraduates as well as the constraints and challenges school librarians face, the authors propose a forging of IL alliances between the UWI Library and high school libraries. This paper draws on three recent cases of collaboration between the UWI Mona Library and high schools that could be expanded into such alliances. The paper can be divided into two broad sections. The first examines the problem of inadequate IL skills among incoming students; the latter discusses in some detail the collaboration. The paper ends with some recommendations.

The Role Of The Library In IL

In addressing the need for UWI graduates to respond to a constantly changing environment, the Administration recently advocated an expanded programme of teaching and a multi-disciplinary approach to research. According to the Principal of Mona: "The campus will emphasize sound undergraduate education...to produce graduates capable of thinking, researching material, analysis, integrating knowledge and coherent expression of ideas" (*Mona Campus Development Plan 1999-2000*, p. 6).

Although not explicitly stated as IL competencies, the attributes included in the University's vision are similar to the competencies identified by the Association of College and Research Libraries (ACRL) as necessary for students in higher education institutions. The *ACRL Standards* make it clear that these IL competencies become "increasingly

important in the contemporary environment of rapid technological change and proliferating information sources.” (2000, p.2) UWI’s vision is also close to that of the American Library Association on the role of IL:

Information Literacy forms the basis for lifelong learning. It is common to all disciplines, to all learning environments, and to all levels of education. It enables learners to master content and extend their investigations, become more self-directed and assume greater control over their own learning.
(*Information Literacy Standards*, 2000, p.2)

To develop graduates with the attributes envisioned by the UWI Administration, the Mona Information Literacy Unit (MILU) was set up in January 2001 as a sub-section of the Library’s Loan and Reference Section.³ It draws on the assistance of Reference Librarians, a specially trained group of librarians as Internet Trainers, as well as other librarians for very large classes.

Focusing on Information Literacy as ‘the ability to locate, evaluate, and effectively use information,’ the Unit aims to assist in developing students’ higher order critical skills and independent learning by

- Emphasis on critical research skills in all teaching modules;
- Setting of objectives, standards and outcomes for student learning;
- Inclusion of all types of information sources and formats (cf. the Library’s print resources) in the information seeking and evaluative process;
- Promotion of IL to Faculty and Administration, and in particular, faculty collaboration with the Library and the integration of skills within the curriculum;
- Developing the teaching skills of librarians. To this end, a number of in-house workshops have been conducted, and three librarians have attended the ACRL Institute for Information Literacy Immersion Programme.

Currently the IL Programme includes:

- A module in two University Foundation Courses, ‘Writing for Academic Purposes’ (FD10A) and ‘Language, Exposition and Argument’ (UC120). In the last academic year *2001-2002*, over 1500 students were reached via these modules;
- Collaborative sessions/modules within subject courses at the request of Faculty, thus reaching a wide range of students, including those in graduate programmes;
- Open sessions on ‘Research strategies on the Internet’, ‘Using the OPAC’, and ‘Using online databases’.

Innovative teaching methods have been employed, e.g., a skit on “The Information Literate Student” produced initially for a session promoting IL to Faculty.⁴ This presentation, depicting competencies of the information literate student, was subsequently captured and used in a number of PowerPoint Slide Shows. It was included, too, as a live presentation in the UC120 lecture this academic year. A video, *e-literate?* (UCLA and Pacific Bell, 2000), has also been used to stress evaluation of information sources. There has been an emphasis on pedagogy, especially connecting with students through question and answer interaction, and encouraging independent learning through hands-on exercises.

The Problem

It is clear that the Library’s IL modules are not intended to be introductory, but to build on the knowledge the Library assumes students have brought to UWI. As implied, the Library’s assumptions are unfounded. Both Faculty and librarians have indicated that, even after participating in the IL modules, students continue to display an inability to fully assimilate the higher order skills that were taught.

During Library-Faculty discussions at the start of the last two academic years (2001/2 and 2002/3) faculty members expressed frustration with the inability of students to demonstrate both a critical approach to learning and research and basic information skills to operate within the university environment. In September 2001, the views of 150 Faculty members were sought in an informal survey at the Library’s Annual Faculty Lunch-Time Orientation Sessions. Faculty were given a very short ‘questionnaire’ that was essentially a sheet with two statements, “I wish my students would...” and “I wish my students would not...” (Appendix A)

The range of responses is detailed in Table 1, but it was clear that, according to their lecturers, students were not internalising nor transferring the information skills to which the Library sessions had exposed them.

Table 1. Comments from UWI faculty on students' competencies

Qualities of Ideal Student

" I wish my students would..."

- Find reference books
- Read History Today and other current journals
- Stay curious
- Attend lectures and tutorials
- Read the material assigned
- Be able to apply their own initiative to learning
- Have an inquiring mind
- Have readiness for class
- Have the willingness to do extra work to improve performance
- Read many sources
- Make use of subject catalogue to find alternate texts
- Seek education and not certification
- Improve in their use of English
- Challenge the tutors more with alternative ideas
- Use electronic resources in writing their papers
- Read independently
- Be better prepared for their exams
- Critically analyze the sources
- Use relevant information
- Document or cite sources properly
- Think, read and write critically
- Be more articulate in oral and written discourse
- Complete assignments on time
- Be proactive in areas of research
- Participate in courses
- Think for themselves, keep and use their common sense
- Use open shelves in library
- Consult bibliographies in all forms
- Read foreign newspapers

Concerns about students

" I wish my students would not..."

- Plagiarize
- Abuse the resources of the library
- Make noise inside and outside of the library
- Destroy books and journals
- Hide, misplace, steal and keep books
- Mark books
- Accept written material as gospel
- De-contextualize what they read
- Regurgitate from lectures and books
- Fail to organize written work properly
- Be afraid to speak their minds and ask questions
- Rely on the tutors and lecturers to supply all the information needed
- Delay in preparation
- Copy large chunks of data without understanding it
- Use only old and outdated sources for research
- Detest reading, researching and analyzing
- Lack preparation for tutorials
- Keep asking which is the best text
- Buy course required texts only
- Purchase dictionaries only
- Hand write essays
- Think purely in terms of passing exams
- Write like a Gleaner journalist

Comments from UWI Faculty on students' competencies

The views of Faculty were corroborated by the experience of Reference and Instruction Librarians who report that many students displayed dependence on a very few sources of information, inability to use a catalogue effectively to identify material on a topic, and often were incapable of expressing an information need. In some cases, this was evident even after IL sessions. Three major reasons have been proffered for this state of affairs:

- Too many new concepts are being taught in too short a time;
- There is little opportunity for reinforcement for the majority of students who were taught in one-shot sessions;
- Most incoming UWI students have had little prior exposure to IL skills.

The data from the 'warming up' questionnaire (Appendix B) referred to above support the contention that students' prior exposure to using a library or to research skills is limited. This view is not without support elsewhere. Elspeth Goodin, researching a number of libraries in the United States, comments that "Discussions with college librarians involved with library instruction programs indicate that a significant number of students have been entering college unprepared to function efficiently and effectively in an academic library." (1991, p.33). Describing the US environment also, Dickenson states that:

even those students not crippled in other ways by their preparatory education are, almost without exception, totally innocent of how a library works and do not have even a vague idea of how to set about finding information they need or want when they arrive at college or university (1981, p.853).

According to him, if students were properly instructed in high schools academic librarians could move beyond remedial work to reinforcing basic skills and moving on to higher order ones.

It is unlikely that, in the near future, the amount of time allowed for direct IL training at UWI will be increased. MILU will have to concentrate on dealing with the higher order skills. Consequently, a large part of the solution to the problem rests with the high schools and so it becomes imperative that UWI librarians understand the situation in Jamaican/Caribbean high schools as a necessary preliminary step. Cahoy supports this: "It is important to become familiar with the skills with which students are entering college, and there's no better place for academic librarians to start learning about students' potential needs than at the local high school and its library." (2002, p.4).

State of High School Libraries

In Jamaica, the Schools Library Network (SLN), a division of the public library system, has responsibility for the libraries of most of the island's high schools. Some of the services offered by SLN are centralized acquisition, staff training in basic library science as well as visits to monitor progress and offer advice. (Shelley Robinson, 2000). However, SLN's responsibility does not extend to approximately 50 technical high and traditional grammar schools, some of which are the top feeder schools for UWI Mona. Shelley Robinson indicated that there were numerous challenges and constraints within the Jamaican school system and, within that of the school library, that affected the level and quality of library instruction. These include:

- No formal government policy for the operation, staffing and funding of the school library;
- Unclear policy on the role and function of the school librarian;
- Not enough qualified library staff;
- Lack of available computer facilities in schools;
- Uneven library provisions, space, material and inadequate budget.

Although a few changes have occurred in the last two years, these have not been significant and the trends continue. (Jamaica Library Service, *SLN Region 1 Report*, December 2002.)

In respect of the library instruction given in the schools, Shelley Robinson also found similar challenges:

- No formal information skills syllabus; thus, content is *ad-hoc* and arbitrary: "...the Ministry of Education does not have a formal information skills syllabus so librarians are left to fashion their own, so there is no uniformity or consistency in what is taught and how" (2000, p.8);
- Classes are taught in isolation from the curriculum;
- Emphasis is on library skills in the traditional mode: i.e., on skills in locating and using print resources.

A survey of 15 selected high schools⁵ conducted by the authors over one week in March 2003 suggested that the situation remained substantially the same as in 2000. The telephone survey included 8 traditional grammar schools, 1 technical high and 6 newer (upgraded secondary) high schools. Calls were made to librarians identified via the mailing list of the Schools Section of the Library and Information Association of Jamaica (LIAJA). More schools had been identified for polling, but it was impossible to reach some of the librarians, as there was either no telephone in the library or librarians were involved in heavy schedules of subject teaching. Despite the obvious weaknesses in the survey, however, the findings seem to corroborate the earlier findings of Shelley Robinson. On the plus side:

- Library/information skills **are** taught in all but one of the schools surveyed;
- Zeal and interest were expressed by most teacher/librarians about teaching information skills;
- Most librarians surveyed were qualified and had additional training in teaching information skills, chiefly through workshops and seminars conducted by the Schools Section of LIAJA.

On the negative side:

- Formal teaching of library/information skills is done **only** at the lower levels, i.e. between grades 7 and 9;
- Most librarians cover traditional skills (Table 3);
- No two librarians surveyed worked from the same curriculum;
- There was little collaboration between subject teachers and school librarians on integrating competencies within the curriculum. [Three librarians indicated that they assisted with identifying teaching materials for classes, and a few of those who have attended IL training indicated they integrated examples from subject classes in teaching IL skills]

On the issue of collaboration between teachers and librarians, Senator (1995) feels that "It is more difficult to collaborate in high schools because of the way schedules are set, the autonomy of subject area departments, and how high school teachers see their content defined." (as cited in Bishop & Larimer, 1999, Literacy Collaboration section 3). In the Jamaican context, Shelley Robinson (2000) also points out that, because teachers themselves lack information skills, they tend to resist integrating IL programmes into their classes.

Yet the integration of information skills is stressed by writers such as Benjamin Bloom: "Our general understanding of learning theory would seem to indicate that knowledge which is organized and related is better learned and retained than knowledge which is specific and isolated." (as cited in Goodin, 1991, p.33). Dianne Kester, in more specific terms, says that

High school library skills instruction appears to have little carry over or effect on students going on to college, with but a few exceptions. ... [L]ittle integration of library skills with course content appears to be taking place.... This may, in fact, explain the small carry over of library skills. If what is being taught is being done in isolation, research has for some time now shown this to be the least effective method of library instruction. (1994, p.17)

Transferable skills are skills taught in the context of real situations and collaboration, therefore, becomes essential for training in Information Literacy.

Further, the telephone discussions with librarians also revealed that in some high schools, students were not allowed access to the card/online catalogue as this was primarily for the librarian's use. In some of the schools, the library was relatively small and students could browse for themselves easily so the onus was on the librarian to locate any

items not identified by browsing, becoming in the process *the* focal point for identifying and locating information. But as Beverly Renford (as cited in Goodin 1988, p17) has argued, students accustomed to browsing in small school libraries often have difficulties using a catalogue in another environment. At the Mona Library, many new students have an almost negative attitude to using the catalogue. Some do not grasp that the role of the librarian is to offer teaching in the use of the catalogue and not to direct them to specific sources on the shelves.

The most disturbing finding of the school survey was that teaching of library skills is concentrated at the lower grades. Equally disturbing was the fact that the librarians surveyed stated they had little or no control over this trend. The reasons include school policy, personnel and time constraints, as most operated solo and had other subject teaching assignments. Of those surveyed, only 4 schools offered formal library skills classes above grade 8. [In one instance, classes for grade 9 students were primarily for remedial reading. In fact, 1 school offered library skills for one semester only in the grade 7 year]. There was no formal class teaching at the levels in which students would begin to do independent research at grades 10,11 and at 12 &13 (the 6th Form/Community College levels) prior to their entering university. All librarians surveyed agreed that students forget what is taught and that although they give one-to-one training at the higher levels there is need for structured instruction. What is lacking is what the *AASL/ ACRL Blue Print for Collaboration (2000)* refers to as the seamless approach to teaching Information Literacy competencies, i.e. continuation of the teaching of these skills throughout the student's life.

According to the *AASL/ACRL Blue Print for Collaboration*, IL at the tertiary level, i.e. adopting of the *Information Literacy Competency Standards for Higher Education*, should be viewed as a continuation of the *Information Literacy Standards for Student Learning* used at the secondary level. The Blueprint advocates a 'seamless continuation' of the standards and recommends a "shared responsibility among academic and school librarians for information literacy." (2000, Background section 3 and Recommendations section C). It is agreed that skills taught at the college level should build on the experience of skills learned at the primary and secondary levels rather than starting anew. (Shelley Robinson, 2000 and Goodin, 1988).

Therefore, although it would seem that students in Jamaican High Schools are exposed to some library and information skills, the seamless approach is not evident as most get little or no exposure to research skills when needed, and especially for the last four years of school. This means that, by the time students graduate and are ready for university, they are unlikely to have mastered the basic skills.⁶

Yet Goodin (1988) found that high school students can learn information and research skills and transfer them to university. However, this teaching must include the senior levels of high school, i.e., when students are making other preparations for college/university life. She advocates the seamless approach, with the "high school librarian becoming a linking agent between the high school and college libraries" (p. iii) Collaboration with high schools then seems one of the best ways forward.

Benefits of University-School Collaboration

University-school partnerships are valuable (Young, 1999) and, under specific conditions, Information Literacy is one area that can benefit from such partnerships. "Instructional partnerships between university libraries and high school libraries can be successful when both partners are given the time and resources for developing collaborative projects with practical application"(Nichols, 1999,p.81). The *AASL/ACRL Blueprint* supports and advocates this kind of collaboration and the report of the Task Force includes examples of successful partnerships between schools and university libraries for IL. (2002).

The foundation for such collaboration exists at UWI. High school students as potential customers are welcomed on the Mona campus. Students and teachers are invited to the University's Annual Research Day when the departments (including the Library) showcase the work of students and staff (especially as these relate to the wider society), promoting the University as integral in the country's development. UWI's Career Week activities attract droves of high school students to the campus to explore the University's role as a gateway to a wide range of career choices. There have been longstanding relationships between schools and UWI departments, such as the Department of History in which Faculty plan workshops, seminars and sometimes field trips for high school teachers and students.

The UWI Mona Library itself shares its Inter Library Loan (ILL) services with high school libraries at little or no cost. During the University's Research Day, the Library become a focal point for tours (mainly to high school students). At the 2003 Research Day, requests for library tours far outnumbered expectations. Ad-hoc orientation tours as well as requests from high schools for group/individual use of the Library are usually considered favourably. In particular, Grades 11-13 (Forms 5-6) students are allowed to use the Library for research projects by special arrangement.

Information Literacy Collaboration

What follows are descriptions of three collaborative ventures between the UWI Mona Library (through MILU) and high schools between 2002 and 2003.

Case 1: Rural High School

In November 2002, the Library responded to a request from the trained paraprofessional in charge of the library at Hampton School for Girls, a rural high school. Her Library Week Programme, focused on promoting reading, included presentations from well-known Jamaican storytellers and reading experts. Recognising the value of teaching critical information skills via reading, the staff member, through the school's Principal, requested that the Mona Library make a presentation on this topic.

The Programme

From the outset, we decided that the standards for the information literate student would provide the framework within which we would develop the presentation. We wanted to ensure that at the end of the sessions students were introduced to a few basic critical IL skills, in particular the skill of *evaluating information*, a higher order thinking skill often least used by UWI students.

To cater for the differing needs of students with a wide range of ages, (we were asked to make presentations to 840 upper and lower-school students), two separate presentations were prepared. The overall objective of both was to introduce students to a number of evaluative techniques that may be used in reading information sources. The 'critical reader' component, i.e. 'reading deeply,' was emphasised. Bishop (1999) points out that among the nine standards in *Information Literacy for Student Learning*, standard five emphasises literature: *the student who is an independent learner is information literate and appreciates literature and other creative expressions of information*. Since critical reading is essential at all levels and students may be taught information literacy competencies within this framework of literary appreciation, reading for pleasure was also included.

Since the group was fairly large and presumably incorporated various learning styles, we drew on a variety of teaching techniques: question and answer, story telling, dramatic presentation, and 'reflection time.' Audio-visual material and PowerPoint were used as tools.

The Presentations

1. "Beyond Words" to Grades 11-13 from Hampton as well as the neighbouring 'brother' high school, Munro College, included questions on what and why the students read. This provided the opportunity to introduce students to a range of other reading material such as reference books, periodicals, biography and fiction. Students then reflected on a questionnaire "How do I read?"⁷ These simple yet provocative questions allowed for easy transition to discussing aspects of critical reading, in essence 'moving beyond words': reflecting on and asking questions of author, source, text and context. Following this, excerpts from two passages from the local newspaper, *The Gleaner*, were presented and then analysed for bias by the group. The video *e-literate?* was used to reinforce the need to evaluate information.
2. "Read for your life!" was targeted to Grades 7-9 students from Hampton. An interactive, somewhat easy going and lively session (students were younger and less inhibited), it included story telling, poetry reading and sharing of reading experiences among students and presenter. Yet it incorporated many of the competencies needed for the critical use of information and more specifically critical reading. So it included areas such as reading for pleasure and information, exploring a variety of reading material, asking questions and evaluating information sources (such as the two passages from the local newspaper.)

After introducing students to broad areas of reading and critical skills, the presentations were ‘topped’ by a modified version of a skit, in which one of the presenters displayed props to support a script highlighting attributes of the ‘information literate student’ or the ‘critical reader.’ The skit presented the ‘information literate student’ as one who:

- ‘Values inquiry and asks questions’
- ‘Consults a variety of information sources’
- ‘Analyses information in order to evaluate quality’
- ‘Synthesizes new information with current understanding’
- ‘Uses information responsibly and records sources used.’

A question and answer session allowed for feedback and opportunity to address issues from the students’ perspective.

We also prepared and downloaded from the Internet handouts on aspects of critical reading for the library assistant to incorporate in her library/information sessions, as well as pointers for the students doing research. A gift of books, and a poster produced by the Commonwealth Library Association (entitled *Read*) were presented to the Principal. The library assistant requested follow-up assistance with additional material, including copies of the video on information literacy.

Students’ response and feedback from teachers and library staff confirmed that this was a possible route to take for assisting high school students with developing information competencies. It seemed to us that students were eager and ready to learn, especially in a non-threatening, non-classroom environment, with the novelty of invited guests.



Figure 1
Hampton students in question and answer period during ‘Read for your life!’



Figure 2.
Use of props highlighting the information literate student as one who ‘values inquiry and asks questions’

Case 2: Working with High School Subject Teacher

In November 2002, another request was made for MILU's assistance to high school students. On this occasion, the Grade 11 English Literature teacher, a recent graduate of UWI, requested a Library orientation tour for her students from a neighbouring high school, Mona High. The teacher wanted to encourage her students to achieve a higher standard of work by exposing them to their future goal, attendance at UWI. The Library saw this as a means of acquainting students with information literacy competencies. The opportunity was used, therefore, not only to give a tour but also to introduce students to the OPAC as a tool for finding resources in the Library. Many of these students had never had an opportunity to access an online catalogue. The tour allowed them to explore resources in their subject field.

Case 3. Reaching Caribbean High Schools by Distance Education

The University Distance Education Centre (UWIDEC) is the Department that co-ordinates all distance teaching of UWI. In March 2003, a request was made of MILU to present a session "When researching a topic: Who[m] can I trust? Where can I go?" to approximately sixty students in a number of Caribbean territories. This is part of a series by UWIDEC to assist 6th form students preparing for the Advanced Level Examinations. Other topics in the series to be presented by Faculty include "The Language divide" and "The impact of modern communication technologies." These sessions are transmitted via interactive audio-graphic teleconferencing to UWI distance teaching centres all across the Caribbean.

Aware of the challenges to teaching and learning that the distance method presents, we focused on adding variety to our presentation methods. Therefore, in the two-hour session, we employed not only the lecture method via a brief PowerPoint presentation, but also question and answer. In the distance mode, directed discussion is used widely to "promote several types of thinking" including critical and higher order thinking skills. (Mullenburg and Berge, 2002). Constant interaction with and repetition of the concepts was also important in light of the limitations of distance teaching and also because of our lack of knowledge of the audience's prior information competencies. Flexibility allowed for input from students and catered for the inevitable hitches in the technology. Team teaching provided variety.

The IL competencies highlighted were: identifying an information need; locating, evaluating and using effectively a variety of information resources (traditional sources like reference and text books; periodicals - from scholarly to glossy; the Internet; the mass media; interviews, and even the community grapevine). Recognising that students are exposed to misinformation in all aspects of life, evaluation of information was set in a context wider than the merely academic.

Among the limitations of the cases above was the lack of formal evaluation of the sessions. Still, even such one-off events can provide avenues for bridging the gap between high school and university. The following are suggestions for developing such opportunities.

Suggestions for Future Programmes

Based on our experiences as Instruction Librarians, the results of the survey among schools and the above IL ventures, we believe that collaboration between UWI and Jamaican high schools for the benefit of our common clientele is possible. In fact, there already exist pockets of activity that may be expanded and exploited.

- Research Day tours could be used as formal avenues for introducing and emphasising IL competencies to high school students. The material could be presented in an interesting and fun way along with tours of the library's collections in an environment that is non-threatening;
- Presentations to 6th Form students via UWIDEC may be regularised and expanded.
- The availability of the Library's OPAC via the Web could be promoted to 6th Formers. MILU might offer short sessions to school librarians on using the OPAC so that they could better assist their students in identifying relevant material prior to visiting the Library;
- Evolving from requests by subject teachers for high school students to use the UWI Library for research, formal sessions for Grades 11-13 students could be instituted. These could include introduction to basic research skills.

- MILU could design, along with teacher-librarians, summer workshops on IL skills for high school students. This would introduce students to the tools/environment many of them are shortly to use.
- The Hampton experience might be expanded to offer IL sessions in select high schools as staffing allows.
- UWI Library Information packages could be sent to high schools.
- A video of the skit “Information Literate Student” could be developed and made available to high school libraries, along with other teaching material.
- MILU could work in collaboration with the Schools Section of LIAJA to design and conduct additional sessions for school librarians.
- The University Library should lobby the Ministry of Education in Jamaica to develop a comprehensive Information Literacy curriculum for high schools. MILU may then collaborate with organisations like LIAJA to develop a structured curriculum for information literacy skills at the secondary level. The skills content of this syllabus could be linked to that identified as necessary at the tertiary level.

Conclusion

The major contribution of the UWI Library’s in the proposed collaboration would be to increase the exposure of students to IL, especially during summer workshops. However, the other, larger problems are outside the control of both parties - problems of school policy, absence of a single, national IL syllabus for high schools, non-integration of IL within the curriculum, and heavy workloads of teacher-librarians. The solution to these will require intervention by the Ministry of Education. But conditions in the environment, particularly the rising need for IL competence throughout the society, must, sooner rather than later, force a response.

Notes

- ¹ The University of the West Indies (UWI) is an autonomous regional institution supported by and serving 15 different Caribbean countries. Founded in 1948 at the Mona Campus, Jamaica, the University has campuses in Trinidad and Barbados. The St. Augustine campus in Trinidad was started in 1960 and the Cave Hill campus in Barbados in 1963. UWI also serves the Caribbean region through Distance Centres in non-campus territories. University enrolment for 2000/2001 was 23,925.
- ² Over 70% of respondents stated they used a variety of information sources for assignments; knew how to use a library to find information, what plagiarism is, how to analyse an essay topic and to write a bibliography. However we suspect that, because of the leading questions, these percentages are inflated.
- ³ The IL programme replaced the Library’s Bibliographic Instruction programme, started in 1985, the focus of which was stated then as teaching students “how to organize and conduct a library search as well as how to select and use appropriate reference works. “(E. Brown, personal communication, May 17, 1985.) Bibliographic instruction was given in a module of a University Course, “Use of English.”
- ⁴ The use of the skit has been described in: George, Verna and Kerr, Paulette (2002, June). Parties for partnership: getting faculty aboard an information literacy initiative. Paper presented at the 32nd Annual Conference of the Association of Caribbean University, Research, and Institutional Libraries, Ocho Rios, Jamaica.
- ⁵ Schools were selected from a list, “Selected feeder schools to UWI Mona”, supplied by the University of the West Indies Mona Admissions, March 2003. The survey also included some recommended upgraded secondary schools.
- ⁶ This is not unique to Jamaica. See: De Jager and Nassimbeni, 2002, p.170.
- ⁷ Jackson, Katherine. (1999). How do I read? In Critical reading. Retrieved November 2, 2002, from Liverpool Hope, Geography for the new undergraduate Web site: <http://www.hope.ac/Gnu/Gnubackup/stuhelp/reading.htm>

References

- American Association of School Librarians and Association of College and Research Libraries (2000). *Blueprint for collaboration: AASL/ACRL Task Force on the educational role of libraries*. Retrieved February 27, 2003, from <http://www.ala.org/acrl/blueprint.html>
- Bishop, Kay & Larimer, Nancy (1999). Collaboration: Literacy through collaboration. *Teacher Librarian*, 27(2), 15-20. Retrieved February 27, 2003 from Wilson SelectPlus database.
- Cahoy, Ellysa. (2002). Will your students be ready for college? Connecting K-12 and college standards for information literacy. *Knowledge Quest* 30 (4), 12-15. Retrieved February 24, 2003 from OCLC FirstSearch database.
- De Jager, Karin & Nassimbeni, Mary (2002). Institutionalizing information literacy in tertiary education: lessons learned from South African programs. *Library Trends*, 51 (2), 141-261.
- Dickinson, Dennis W. (1981). Library literacy: Who? When? Where? *Library Journal*, 106 (8), 853-855.
- Donham, Jean (1999). Collaboration in the media center: Building partnerships for learning. *NASSP Bulletin*, (March), 20-26.
- Goodin, M. Elspeth (1988). *The transferability of library research skills from high school to college* (Doctoral dissertation, Rutgers The State University of New Jersey, 1987) UMI 8803480.
- Goodin, M. Elspeth (1991) The transferability of library research skills from high school to college. *School Library Media Quarterly*, 20 (1), 33-42.
- Information literacy competency standards for higher education*. (2000) Chicago: Association of College and Research Libraries, American Library Association.
- Information Literacy Standards for student learning* (1998) Chicago: American Library Association.
- Jamaica Library Service (2000, Christmas Term) *Schools Library Network Region 1 Report*: Kingston, Jamaica
- Kester, Dianne (1994) Secondary school library and information skills: Are they transferred from high school to college? *Reference Librarian*, 44, 9-17.
- Muilenburg, Lin & Berge, Zane L. (2002) *A framework for designing questions for online learning*. Retrieved April 3, 2003 from <http://www.emoderators.com/moderators/muilenburg.html>.
- Shelley Robinson, Cherrell (2000, October). Teachers and Information Literacy in Jamaica: A case study. Paper presented at the Commonwealth Library Association (2000) Seminar, Christ Church, New Zealand.
- UCLA Graduate School of Education and Information Studies and Pacific Bell Initiatives for 21st Century Literacies. (Producer) (2000) *e-literate?* [Video Recording] (University of California Regents)
- University of the West Indies (1999/2000). *Calendar* Kingston, Jamaica.
- University of the West Indies (1999-2000) *Mona Campus Development Plan* Kingston, Jamaica.
- University of the West Indies (2000) *Vice Chancellor's Report to Council* (April) Kingston, Jamaica.
- Young, Susan A. & Lynn, Romeo (2002). University and urban school district collaboration: preschoolers and pre-service teachers gain literacy skills. *Reading, Research and Instruction* 38 (2), 101-14.

Biographical Note

Paulette Kerr, B.A., Dip.L.S., M.A. (History), has been a reference librarian at the University of the West Indies, Mona since 1986. She was instrumental in developing a programme for Internet training and a subsequent team of Internet Trainers. In January 2001 she was appointed Coordinator of the Mona Information Literacy Unit (MILU) and given the responsibility to spearhead an IL Programme. A graduate of the ACRL Institute for Information Literacy Immersion, she along with Verna George, in 2002 made IL presentations at the Association of Caribbean University, Research and Institutional Libraries (ACURIL) Conference in Jamaica and at the ALA Conference in Atlanta. Email: verna.george@uwimona.edu.jm

Verna George, B.Sc. (Zoology); Dip.Ed.; Dip.L.S. (UWI.) is Acting Head of Loan and Reference and the Mona Information Literacy Unit at the University of the West Indies (Mona) Library.

In 2002, she attended the ACRL's IIL Immersion (Track I). With Paulette Kerr, she presented Parties for partnership: Getting faculty aboard an IL initiative at the 32nd Annual Conference of the Association of Caribbean University Research and Institutional Libraries; and, Partnership in the making: The easy task of getting faculty on board an IL initiative at the International Poster Session, ALA Conference (2002). Her poems have been published in *The Caribbean Writer*, *Pathways*, and *The Arts*. Email: paulette.kerr@uwimona.edu.jm

Appendix A:

Qualities of Your Ideal Student

I Wish My Student Would:

1. Read more widely.
2. Consult varied information sources critically analyse each use relevant information and properly document each in his/her work.
- 3.

P.T.O.

Your Concerns About Your Students

I Wish My Student Would:Not:

1. Depend on my knowledge to supply the content of their research.
2. Use only old and outdated sources for their research.
3. Detest reading, researching and analysing.

Appendix B:

"Your Library & You" Session

Semester 1 2002

LIBRARY ACTIVITY

You may fill in the response below using either a pen or pencil)

FACULTY _____ HALL _____

Please answer the following questions in the spaces provided:

1. I feel apprehensive about doing my first UWI class assignment. Yes [] No []
2. I know how to use a Library to help me find information. Yes [] No []
3. When I do my assignments I usually use information from a variety of sources, eg. encyclopedias, Internet, newspapers. Yes [] No []
4. I know how to analyze my topic before writing an essay. Yes [] No []
5. I know how to search a card catalogue in a library, Yes [] No []
6. I know how to use a computerized catalogue. Yes [] No []
7. I know what plagiarism is. Yes [] No []
8. I know how to write a bibliography. Yes [] No []
9. I have used a search engine to find information on the Internet Yes [] No []
10. The search engines I have used are:

11. I have used a library before. Yes [] No []

Myrtle E. HarrisLibrarian, School of Education
Documentation Centre
Mona Campus
University of the West Indies

This paper looks at the collaboration between teachers and school librarians necessary for the effective teaching of information literacy skills in schools with specific reference to secondary schools in Jamaica. It discusses the barriers that school librarians sometimes face in seeking to teach collaboratively as a result of perceptions held of their role in the delivery of the curriculum. It argues that, if the goal of information literacy is to be achieved, school librarians will need to forge strategic partnerships with stakeholders who can help to influence change.

Introduction

Information literacy has been a central issue in the literature on school librarianship for more than a decade. Many definitions have been offered and various models developed for the teaching of the information literacy skills considered necessary for survival in the 21st century. Most of the research has come out of the developed countries where developments in information and communication technologies have made the preparation of students to cope in an information society an imperative. However, while there may be comparatively less activity in developing countries like Jamaica, library and information professionals recognize the importance of information literacy and the value of partnerships in developing students' information literacy skills.

The promotion of an integrated approach in developing students' information literacy skills followed earlier unsuccessful attempts to teach skills in isolation in the school library. This approach is intended to make programs more meaningful and relevant to students' needs and interests. Standards such as those published by the American Library Association in *Information Power: Building Partnerships for Learning* (1998) have provided guidelines for librarians seeking to collaboratively deliver student-centered library programs with the aim of preparing students that are independent and lifelong learners. The importance placed on partnership in the delivery of programs is evident in the shift in emphasis in these guidelines to the role of "instructional partner" from that of "instructional consultant" described in the earlier edition - *Information Power: Guidelines for School Library Media Programs* (1988).

In Jamaica, where there has been increasing interest in information literacy among library professionals, school librarians since the early 1990s have been lobbying for policy and administrative support for the introduction of information literacy skills instruction in schools. However, although the new curriculum for Grades 7 to 9 with its emphasis on integration offers opportunities for the successful integration of information literacy skills across the curriculum, this has not taken place. "Library skills" are still generally taught in isolation in schools. As Harris (1997, p. 9) suggests, any integration that may be taking place in Jamaican schools is "teacher-based rather than teachers-based". Thus, the teacher-librarian who also teaches in the classroom will plan integrated activities that are meaningful for his/her students. However, collaboration with teachers to plan and teach information literacy skills remains an ideal. In the absence of collaboration with teachers, and of policy and administrative support for it, school librarians are likely to continue to play a marginal role in the delivery of the new curriculum.

The focus of this paper is the collaboration between teachers and school librarians necessary for the effective teaching of information literacy skills in schools. It looks at some of the challenges faced by school librarians as a result of perceptions held of their role in the delivery of the curriculum with specific reference to librarians in secondary schools in Jamaica. It argues that, if school librarians are to play a meaningful role in the education process they will need to forge strategic partnerships with stakeholders who can help to influence change. The paper discusses the partnerships that need to be forged at all levels within the education system for success in teaching information literacy skills collaboratively in schools. The terms “library media specialist” and “teacher-librarian” are used in context interchangeably for the generic term “school librarian” used throughout the paper.

Information Literacy Defined

A number of definitions have evolved for the term “information literacy”. The classical definition is that offered in the Final Report of the American Library Association Presidential Committee on Information Literacy (1989): “To be information literate, a person must be able to recognize when information is needed and have the ability to locate, evaluate, and use effectively the needed information” (p. 1). Spitzer (1998) observes that “this definition has been widely accepted by those within the library field and forms the basis of subsequent definitions” (p. 22-23). This certainly is the one to which reference is most often made in the literature. Inherent in the concept of information literacy is the notion of an individual who has learnt how to use information from a variety of sources critically and ethically for problem solving and decision-making in all spheres of his/her life.

In a report on a *Literacy Improvement Initiative* in Jamaica, the writers include information literacy among what they describe as “a burgeoning field of definitions available” for literacy (University of the West Indies, School of Education, Education Research Centre, 1999, p. 15). Building on other definitions, they go on to offer “a dynamic definition of literacy” that encompasses information literacy:

Literacy refers to a complex set of abilities to understand and **use** the **dominant** symbol systems/language of a culture for individual and community development. In a technological society the concept of literacy is **expanding** to include the **media** and **electronic** text, in addition to **alphabet and number** systems. Literacy includes critical understanding, problem-solving abilities, and oral/aural abilities.

Literacy abilities are not static and will vary according to contexts and need. They begin with the child’s acquisition of his/her first language and the intuitions developed about the way communication works in natural settings. To continue on-going growth in literate behaviour, individuals should be given **life-long learning** opportunities to develop all aspects of their literacy potential. (p. 15) [The writers’ emphasis]

It is argued that “there is no one pathway to literacy or one type of literacy”; and that because literacy is “cognitive behaviour”, opportunities need to be created for “thinking” behaviour when promoting literacy (p. 16).

Whether we choose to promote information literacy independently or in the wider context of literacy for individual and community development, there is no doubt that partnerships are critical to success. Information literacy should not be the concern of librarians only.

The Value of Partnerships for Information Literacy

What are the characteristics of a “partnership”, and what are the implications of forging partnerships in the context of the school? The term “partnership” encompasses many different types of relationships (The Family Literacy Action Group of Alberta, 1996, p. 17). A partnership is an undertaking between two or more parties to do something together.

The following are some of the characteristics of successful partnerships identified in the literature:

- clear and common goals and objectives that have been mutually agreed upon;
- shared authority and power;
- shared planning and decision-making;
- shared responsibility and accountability;
- shared risks and mutual benefits;
- shared strengths and resources;
- honesty and clear communication;
- mutual trust and respect for knowledge and skills;
- joint evaluation of progress.

Collaboration and cooperation are two types of relationships applicable to our discussion on partnerships for information literacy. A collaborative partnership between school librarians and teachers moves the parties involved to a level that surpasses the cooperation that characterizes situations where information skills are not integrated across the curriculum. Where mere cooperation exists, each individual or group retains authority and resources and can have different goals. The sharing that is critical to collaboration is absent. In collaborating, the underlying assumption is that partners and stakeholders will benefit to a greater degree than they do when they work independently of each other.

Farmer (1999) illustrates the value of such a partnership in her report of a school wide reform effort in the United States, which followed previous attempts at implementing “a scope and sequence of information literacy skills, which was passively adopted - and then ignored”. Concluding that “partnership counts”, Farmer (1999) identifies the reasons for the success of this initiative:

- it grew out of teacher-perceived need;
- the effort was student-centered;
- classroom teachers partnered with [him] taking leadership responsibility for the product and impact;
- the entire faculty was involved throughout and owned the process.

Farmer (1999) notes:

I worked more closely and deeply with the different departments than ever before as they took the lead in examining their practice and improving it. I also negotiated much more than usual.... I respected the community's needs and comfort zones and worked with them to own the results - and help students become information literate.

The goal of collaboration in schools is student learning. Partners no longer run parallel programs, but find common ground in seeking to effect desirable learning outcomes through collaborative planning and teaching. The teacher brings to the relationship knowledge of the students and the subject content, while the school librarian brings his/her knowledge of resources to support learning.

Loertscher (1998) as cited in Donham (1999) points to some of the specific steps that the school librarian, the teacher and the principal can take to advance the process of collaboration in schools. The school librarian “takes the initiative to learn what is taught and how information literacy can be integrated”; shares with teachers and administrators the vision of a programme taught collaboratively; conducts training sessions for teachers about national information literacy standards; and monitors students’ learning experiences by keeping records of skills and processes taught. The teacher accepts the idea of collaboration; shares his/her assignments with the school librarian; discusses with the school librarian “what students need to know about information processes to be successful”; and gives students “meaningful, challenging assignments that demand higher order thinking”. The principal encourages and monitors collaboration between teachers and the school librarian, and “expects the [school librarian] to serve as an active member on curriculum committees”. Thus, each partner has an important role to play in furthering the process of collaboration.

For those at the initial stages of developing a collaborative working style, Donham (1999) recommends the use of a form to guide them. This form, which is intended to facilitate note taking during collaborative meetings, should help to provide structure and focus to formal meetings and thus make them more effective.

Crossing the Barriers to Collaboration with Teachers

Two experiences as a school librarian in the early 1990s illustrate the challenges librarians sometimes face when trying to act as change agents in seeking to integrate information literacy skills across the curriculum. First, a Caribbean colleague shared her feeling of frustration after attempts at initiating discussions with a teacher were rejected. (He did not seem to think they had anything to talk about.) Another colleague, in a defiant response to the resistance of teachers to her efforts to encourage greater use of the school library, announced that she had decided to forget about the teachers and concentrate on the students who were already enthusiastic users of the library. While one can empathize with the response of the latter, it must be admitted that this is not a viable solution to the negative responses of teachers if our primary focus is student learning. The focus should always be on finding ways of facilitating collaboration.

Although over the past decade in the Caribbean there have been commendable initiatives aimed at furthering the process of integrating information literacy skills across the curriculum, we are still some way from the ideals expressed in *Information Power* (1988 and 1998). An important factor that those seeking to negotiate change will need to consider is the possible impact of the perceptions that principals and teachers have of the curricular role of librarians. The perceptions of teachers are particularly important because it is with them that school librarians will have to collaborate in attempting to implement change in the way library and information skills are taught in schools.

Harris (2003) conducted a survey of the perceptions of principals, teachers and librarians of the role of a school librarian in 48 public secondary schools in Jamaica. The study showed that 98% of the teachers who responded thought teaching students how to use library resources and equipment was a role that a school librarian should perform. Indeed, 89% indicated that it was a role that he/she definitely should perform. This, of course, is not surprising given the fact that this traditional function is the primary one performed by school librarians in Jamaica.

Responses, however, to the items relating to collaboration were less positive. Although 98% thought that collaborating with subject teachers in developing students' research and study skills was a function that school librarians should perform, only 55% thought that it was a function that he/she definitely should perform. Even less positive was their response to the item relating to participation in the evaluation of units taught collaboratively with teachers. While 61% thought a school librarian should participate in the evaluation, only 14% thought he/she definitely should. Eleven percent of the respondents thought they should not participate, while 26% were undecided.

Although responses to the items relating to collaboration were less positive than those pertaining to the school librarian's traditional teaching function, they still offer a window of hope. While it is difficult to predict whether teachers' actions will be consistent with their perceptions, the findings suggest some openness to the idea of collaboration that could be explored. However, the school librarian's participation in the evaluation of units taught collaboratively could be problematic.

School librarians in Jamaica may have to take the strategic decision to avoid the term "information literacy" in seeking to promote its systematic introduction at all levels of the education system. Some educators tend to resist what they see as the addition of something new to an already crowded curriculum. There are already information literacy skills embedded in the curricula for schools as "learning skills"; and as is noted in the Final Report of the American Library Association Presidential Committee on Information Literacy (1989, p. 1), information literacy is really about learning how to learn. Efforts, therefore, may be more effectively channeled towards promoting collaboration with teachers in the teaching of these skills. Using a common language may help to break down the barriers that sometimes divide them and facilitate the pursuit of common goals.

For example, at the secondary level there are information literacy skills included in the *Curriculum Guide for Grades 7-9* (Jamaica. Ministry of Education, 1998). These are described as "learning skills which are traditionally regarded as the purview of the language teacher [and that] are shared by all subjects in the curriculum" (p. xv). Skills listed that in some cases duplicate skills normally taught in the library as "library skills" or "library and information skills" include:

- | | | |
|--|---|---|
| 1. Locating information | - | using encyclopedias and reference books and gathering facts from field trips and interviews |
| 2. Organizing information | - | outlining and categorizing |
| 3. Acquiring information through reading | - | using strategies such as skimming and scanning and understanding the importance of pre-reading strategies |
| 4. Acquiring information through listening and observing | - | setting purpose for listening and observing |
| 5. Communicating orally and in writing | - | speaking with accuracy and pose, writing with clarity and exactness, using the writing process |
| 6. Evaluating and applying information | - | applying problem-solving and critical thinking skills (p. xv) |

The *Curriculum Guide* indicates that “the successful implementation of the curriculum depends largely on the teachers [sic] attitude to their subject and the methods employed in teaching” (p. xvi). It further notes that “instruction must be delivered through a wide variety of situations” with adequate opportunities for individual and group assignments; hands-on activities and project work (p. xvi). The issue raised here is very important. Much will depend on the attitude, teaching style, and instructional strategies used by both the school librarian and the classroom teacher if collaboration is to take place.

Partnerships for Change

However, without policy and administrative support, change is not likely to take place. School librarians will have to be brought into the mainstream of curricular activities from that level.

In its White Paper, *Education: The Way Upward* (Jamaica. Ministry of Education, 2001), it is the stated commitment of the Government of Jamaica “to engage our people in the strongest possible partnership in the development of our human resources as the primary tool for personal, social and economic development” (p. 1). The Education Regulations are to be revised to reflect, inter alia, “provision for non-teaching professionals in the system to strengthen our capacity for student care and development” (p. 18). The implication is that all stakeholders (including librarians) are considered to be important to the education process.

There are some policy statements in the White Paper that are relevant to our discussion. In the section that deals with its “underpinning philosophy”, it is stated:

- Learning is a lifelong process that should build on our tradition of cooperative partnership in education (p. 5)
- The ever-changing global environment creates opportunities and makes demands for a society which actively develops a creative thinker-worker with the attitudes, skills and knowledge to be a controller of his environment not a victim of it (p. 5)

There are also two sections relating to the “implementation framework” that are relevant. First, as part of a charter that includes the rights of citizens to education, it is stated that “every citizen will have access to libraries and other information services that will provide the resources and instruction technology skills to facilitate life-long learning and to ensure that each person can function effectively in an information rich global environment” (p. 11). Secondly, there is a partnership agreement that acknowledges the policy and overall administrative responsibility of the Government for education and training, but recognizes that this responsibility must be exercised within the context of a partnership with various constituents identified.

The inclusion of “libraries and other information services” as part of the “implementation framework” followed lobbying by librarians when they observed that the Green Paper (Jamaica. Ministry of Education and Culture, 1999) that preceded this White Paper (Jamaica. Ministry of Education and Culture, 2001) made no mention of libraries. The role of the Library and Information Association of Jamaica (LIAJA), like other “established national organizations” representing civil society will be “to monitor developments and respond to national needs” (p. 14). Unfortunately, the library profession is not a member of the National Council on Education (NCE) – “the body established to increase community participation in policy formulation” (p. 29). This means that LIAJA and “affiliated agencies” such as the Jamaica Library Service (JLS) will have to be proactive in addressing issues such as information literacy even while continuing to lobby for library professionals to be represented on the NCE.

It is only when there is active policy and administrative support followed by the relevant curricular changes at the level of the Curriculum Division of the Ministry of Education that we might begin to see sustainable system-wide change in what takes place in schools. Principals and teachers are more likely to respond to the initiatives of school librarians if the support exists at those levels.

However, even where a responsive environment exists, with the desirable support at both the national and school levels, there will not be much progress unless school librarians with the support of LIAJA provide leadership in effecting change. They will have to be proactive in:

- a) identifying the information literacy skills that are now being taught by school librarians and teachers (whether as “learning skills” or “library skills”);
- b) determining whether there are any information literacy skills that are not being taught; and
- c) promoting collaboration between school librarians and teachers in teaching the requisite information literacy skills.

Sustainable changes will have to be effected through the Curriculum Division, but without the leadership of the library profession they are not likely to take place. Activities that may be undertaken in collaboration with the Professional Development and Curriculum Divisions of the Ministry of Education as well as the Jamaica Library Service could include training for teachers and school librarians, the development of an information curriculum, and the preparation of appropriate curriculum support materials.

There are other important levels at which change can and is beginning to take place - First, at the tertiary level, in the education and training of teachers and teacher-librarians. This is necessary because, if they are to have responsibility for developing students’ information literacy skills, they must not only have knowledge of information literacy skills and how to teach them but also be information literate themselves. There are already relevant courses on information literacy being taught within the Department of Library and Information Studies (DLIS) that are attended by students of both the DLIS and the Department of Educational Studies (DES) at The University of the West Indies, Mona Campus. Further, there is collaboration within the Department of Educational Studies where, through the Research Methods courses, students are introduced to information sources in education by the staff of the Documentation Centre. Students also access training through the information literacy program delivered by the University’s Main Library.

Preparation of teacher-librarians also takes place at The Mico College in Jamaica where they are trained to teach library and information skills and another subject. While their training is more limited in scope than that offered through the DLIS, and teaching another subject means that they will spend less time in the library, graduates of The Mico College potentially have the following advantages:

1. They enter the education system as teachers and therefore do not have the barrier that librarians who are not teachers may have in seeking to collaborate with teachers.
2. They are able to effect integration at least at the level of their subject.

Perhaps the time has come for more dialogue between librarians at all levels of the education system with a view to ensuring greater coordination in information literacy programs. Certainly, the ideal would be to have students reach the tertiary level with the requisite skills. The goal then would be reinforcement at that level.

Conclusion

The introduction of courses on information literacy as part of the formal preparation of teachers and teacher-librarians has been an important development in Jamaica. In addition to formal programs, there have been several workshops for teacher-librarians organized by the JLS and LIAJA. There are a number of factors that impact on effective collaboration that could be addressed through training programs (For example, communication and leadership).

However, teachers and teacher-librarians need to have more meaningful experiences of integration as part of their training. Furthermore, when they enter the school system they need not only an environment in which they can practise what they have learnt but also the time to do so. Lack of time to practise a collaborative role is a problem frequently mentioned in the literature (For example, McCracken, 2001, Section on Lack of Time to Implement Roles, para. 1).

Critical to the creation of an appropriate environment for collaboration is the principal's support. Sensitizing principals to the role of school libraries and school librarians as part of their training should make a significant difference in what takes place in schools. This is particularly important in countries like Jamaica where the administration of school libraries falls under the public library service, and there is no Education Officer within the Ministry of Education who has direct responsibility for school libraries. Any organizational structure that places school libraries on the periphery of what takes place in schools will continue to exclude them from the mainstream of curricular activities. The interest and support of principals then become particularly important.

LIAJA, as an acknowledged stakeholder in education, must with the support of other stakeholders (including the organizations that represent teachers and principals) continue to lobby for change. One possible avenue for achieving this is through the creation of a body comparable to the National Forum on Information Literacy in the United States with wide support from various sectors regarded as important partners in education. The College Libraries Network (COLINET) has discussed the formation of a Committee on Information Literacy; however, to be successful it must not become another forum where librarians talk to each other. It must embrace individuals representing groups outside the library profession including the learners themselves.

In seeking to promote information literacy, librarians will need to assess their own local situations and formulate strategies that will best meet the needs of learners. In some countries this may include promoting information literacy as part of wider literacy initiatives. Certainly, in Jamaica there are potential opportunities for school librarians and teachers to collaborate in teaching information literacy skills for individual and national development. All that is required is the will of stakeholders to harness their creative energies in that direction.

References

- American Association of School Librarians & Association for Educational Communications and Technology (1988). *Information power: Guidelines for school library media programs*. Chicago, IL: American Library Association.
- American Association of School Librarians & Association for Educational Communications and Technology (1998). *Information power: Building partnerships for learning*. Chicago, IL: American Library Association.
- American Library Association Presidential Committee on Information Literacy (1989). *Final report*. Chicago, IL: American Library Association.
- Donham, J. (1999). Collaboration in the media center. *NASSP Bulletin*, 83(605), 20-26.
- Family Literacy Action Group of Alberta (1996). *Building strong and effective community partnerships: A manual for family literacy workers*. Retrieved March 31, 2003 from <http://www.nald.ca/clr/partner/page17.htm>
- Farmer, L.S.J. (1999). Making information literacy a school wide reform effort. *Book Report*, 18(3), 6-8.

Harris, M. (1997). Integrating information skills into the curriculum: A Jamaican perspective. In *School library imperatives for the 21st century: Selected papers from the 25th Anniversary Conference [of the] International Association of School Librarianship* (pp. 8-15). Seattle, WA: IASL.

Harris, M. (2003). *Perceptions of secondary school principals, teachers and librarians of the role of librarians in secondary schools*. Unpublished.

Jamaica. Ministry of Education and Culture (1998). *Government of Jamaica/World Bank Reform of Secondary Education (R.O.S.E.): Curriculum guide, Grades 7-9 for career education, language arts, mathematics, science [and] social studies*. Kingston, Jamaica: The Ministry.

Jamaica. Ministry of Education and Culture (1999). *Education: The way upward: A green paper for the year 2000*. Kingston, Jamaica: The Ministry.

Jamaica. Ministry of Education and Culture (2001). *Education: The way upward: A path for Jamaica's education at the start of the new millennium*. (White Paper). Kingston, Jamaica: The Ministry.

McCracken, Anne (2001). School library media specialists' perceptions of practice and importance of roles described in *Information Power. School Library Media Research, 4*. Retrieved October 30, 2001 from http://www.ala.org/aasl/SLMR/vol4/perceptions/perceptions_main.html

Spitzer, K.L. (with Eisenberg, M.B. and Lowe, C.A., 1998). *Information literacy: Essential skills for the information age*. Syracuse, NY: ERIC Clearinghouse on Information Technology.

University of the West Indies, School of Education, Education Research Centre (1999). *Literacy improvement initiative*. Mona, Jamaica: Author.

Biographical Note

Myrtle Harris is Librarian in the Documentation Centre, School of Education, University of the West Indies, Mona Campus. She was School Librarian at Presentation College, Chaguanas, a secondary school in Trinidad and Tobago. Myrtle's research interest is school libraries. Her special interest is helping students in general, and student teachers in particular, make effective use of libraries. She is a former Vice-President of the Library and Information Association of Jamaica (LIAJA). Email: mharris@uwimona.edu.jm

Library Practice For Young Learners (LPYL). Developing School Library Services For Primary And Secondary Schools In Disadvantaged Areas In South Africa 1997-2002: A Swedish – South African Project

Maud Hell

School and public librarian
Vikingaskolan

Catharina Engström

School and public librarian
Kalmar stadsbibliotek

Lena Lundgren

County Library Consultant, children/youth/schools
Stockholms stadsbibliotek
Sweden

The LPYL project focused on human resource development and was designed to explore some of the untested innovations in the South African draft Policy Framework for School Library Standards (South Africa, 1998) among a sample of school librarians in all of South Africa's nine provinces. The project was also designed to provide mutual exchange of knowledge and expertise between Swedish and South African library personnel. Ideas from a conference in 1995 and the planning of the South African Policy Framework for School Library Standards formed the important bases for the strategic direction of the project. The two phases involved South Africa's national and provincial education departments and two South African and one Swedish non-governmental organisations.

The LPYL project focused on human resource development rather than on the provision of material resources such as computers, books and shelving. Furthermore, the project was designed to explore some of the untested innovations in the South African *Policy Framework for School Library Standards* (South Africa, 1998) among a sample of school librarians in all of South Africa's nine provinces. The project was also designed to provide mutual exchange of knowledge and expertise between Swedish and South African library personnel. Ideas from the *School Learners and Libraries* conference 1995 (Karlsson, 1996) and the drafting of the *National Policy Framework for School Library Standards* (South Africa, 1998) formed the important bases for the strategic direction of the project.

The project comprised two phases involving South Africa's national and provincial education departments and two South African non-governmental organisations, Sweden's Bibliotek i Samhälle (BiS) and Swedish International Development Cooperation Agency (Sida). For Phase One the South African nongovernmental organisation was the Library and Information Workers' Organisation (LIWO). But when this organisation ceased to operate, Education Policy Unit, (EPU) Natal, became the South African partner for Phase Two.

More About The Background

In the 1990's BiS had contacts with the radical national sister organisation in South Africa: LIWO, which at the time was actively working to fight the apartheid heritage of the South African library system, and had an engagement in the Masizame library in the township of Lingelihle, Cradock. These links between LIWO and BiS, the planning of implementing a new curriculum in a democratic South Africa: *Curriculum 2005* and the initiation of a process, leading to a national policy framework for school library standards, were important factors in the background of the LPYL Project.

Phase One 1997 — 1999: Important Activities

- Study tour to Sweden for 10 South African policy developers at national and provincial level,
- Workshop in Sweden for South African policy developers, media (school library) advisors and school librarians to meet the project partners from Sweden
- The forming of **SCHELIS**, the Standing Committee of Heads of Education and Library Information Services of all nine provincial departments
- Study tour to Sweden for 18 South African media (school library) advisors and school librarians and one national policy developer
- Support to ten pilot schools to establish library committees, formulate library policy and development plans on a local level, and try out good practice ideas
- Development and distribution of 9 000 copies of *Fifteen innovative ways with your learning resources* booklet to state schools in South Africa.

The evaluation report, written by Prof. Archie Dick in October 1999, recommended that, although the LPYL Project had achieved its key objective, it needed to progress to another phase in order to more fully realise its wider aims. A business plan was developed by EPU and BiS for Phase Two of the Project, with participation by DoE and the nine provincial departments of education, and was subsequently approved and funded by SIDA. This report deals mainly with Phase Two.

Phase Two 2000 — 2002

To be able to develop the work of the project schools and the advisors on the provincial level, the role players of Phase One were the foundation of Phase Two. The objectives and activities of Phase Two were to expand and deepen the project. The business plan of the project accordingly states some principles:

- Continuity
- Quality and depth
- Extension not repetition
- Development not dependency
- Reflexivity
- Coherence
- Interdisciplinary co-operation

The project developed links to the Minister of Education's Implementation Plan of Tirisano. Six strategic objectives were formulated in the business plan of LPYL, Phase Two. The six strategic outcomes are:

- Capacity Building and Development
- Materials Development
- Advocacy
- Study Tours
- Information and Communications Technologies
- Case Study Research.

1. Capacity Building and Development

According to the evaluation of Phase Two, some of the most valuable outcomes were the forming of library committees in the project schools and developing school library policies and plans. The visits and support from the project manager played a great role.

Networks with neighbouring libraries were established, stimulated by the local workshops, using drafts of manuals for school library work, produced by the project.

2. Materials Development

Three manuals on school library management and development were developed. This item of the project has not been completely fulfilled as planned so far, owing to a failure in communication with the Department of Education, which according to the original plan were to print and distribute the manuals. Some sub-objectives linked to actions on national level in South Africa were not fulfilled being part of the issue of distributing the manuals. This might happen at a later stage, hopefully.

3. Advocacy

The LPYL attendance at the International Association of School Librarian's (IASL) conference in Malmö was successful. 6-10 August 2000. LPYL was reported on by two South African participants and a member of the South African working group in two seminars at the conference in Malmö. Members of the Swedish Reference Group also attended the conference and organised an exhibition of materials relating to the Project and the work of BiS. A LPYL Project information pamphlet was developed to form part of the display.

A spin-off effect of the project is an exhibition, hosted by the NGO Afrikagrupperna in Sweden. The exhibition presents three Southern African Library Projects and it has been shown in more than 30 places and is still touring in Sweden. One of the presented projects is LPYL. This part of the exhibition will also be shown in Durban at the IASL-conference, in connection with a presentation of the project.

The closing conference 2002 in Johannesburg can be said to have been a part of the advocacy of the project with the participation of organisations within South Africa, such as Masifunde Sonke (a reading organisation on national level) and LIASA (The Library and Information Association of South Africa) for future linkage. At the conference the case study research and the evaluation were presented. Discussions were held about the future and how the project results could be used and followed up.

The documentation of the project can be seen on the project website: <http://www.foreningenbis.org/lpyl/>

4. Study tours

The study tours were a minor part of Phase Two. One Swedish and one South African group made visits, prepared by seminars, and were specially aiming at:

- i) ways of defining and increasing library-related resources for school learners and educators*
- ii) strategies for implementing a school library plan, networking and lobbying at a local level.*

A lot of valuable experience was developed by those visits and in the projects that evolved. However, the main objectives above were not fully highlighted in the tour programmes, according to the evaluator.

Nine Swedish librarians met the South African participants from every project school during a weekend seminar 28th-29th of October 2000 in Johannesburg. Andrew Patterson reported about School Library statistics in South Africa. Representatives from the project schools in Free State, Western Cape and Northern Cape which no one would visit during the study tours, presented their reports. Mrs June Matlala from NCETDE talked about library policy and plan development. The Swedish group then split into three groups and travelled to different parts of South Africa:

North West Province and Gauteng (Helene Swenne, Anna Birgitta Eriksson and Maria Bergstrand)
Limpopo and Mpumalanga (Eva Petri, Cecilia Flodström and Maud Hell)
KwaZulu-Natal and Eastern Cape (Tina Haglund, Karin Westberg and Malin Ögland)

In May 2001 ten South African participants visited Sweden:

Sarie Baadjies, Public Librarian, Borwa/Tweespruit Public Library, Free State and Rose Damon, Library Advisor, Western Cape, visited Eva Petri, Arboga,; Malin Ögland, Bålsta; Anna Birgitta Eriksson, Rinkeby
Jan Beeton, Project Manager, and Zukie Jafta, Media Advisor, Eastern Cape, visited Karin Westberg, Mörbylånga; Catharina Engström, Kalmar
Meisie Komane, Deputy Chief Education Specialist, Department of Education, North West Province, and Whisky Geraldine Monama, Public Librarian, Orlando Public Library, Gauteng,
Susan Masenge, School librarian, Paballelo Senior Secondary School, Northern Cape, and Rodgers Sikhosana, Media Advisor, KwaZulu-Natal Education Library Services, visited Tina Haglund, Tranemo
Motlalepula Teffo, Provincial School Libraries Co-ordinator, Department of Education, Northern Province, and Mathandi Mokumo, Teacher Librarian, Mehlwana Secondary School, Mpumalanga, visited Maud Hell, Lund.

Reports can be found on the website from the tours as well as from the different projects the participants planned and conducted in their own schools.

5. Information and Communications Technologies

ICT became part of the project to make sure that this vital issue would not be overlooked in the project. The activity was primarily a seminar conducted by Futurekids at the seminar in October 2000 concerning the use of Information Communication Technology in learning and teaching in schools - an example of alternative library related resources. Some of the projects touch upon the possibility of using of computers and Internet at school.

6. Case Study Research

The objective of this research was to *“To examine and understand the limits and potentialities of the north-south exchange programme for developing media advisors, school library managers and public librarians in South Africa”*. Three schools were investigated in a research project conducted by researchers from EPU assisted by local teacher librarians trained in case study methods.

In the conclusions of the report by Santha Naiker and Sandile Mbokazi *Developing Libraries For South African Learners and Teachers: Three Case Studies (2002)* it is said that one of the most important best-practice changes that could be made in South African schools was the implementing of library committees, operating effectively through regular meetings for the practice of inclusive and democratic decision-making.

The conclusion in the report of the evaluator Birgitta Alm is *“Many constructive changes had occurred in the case study institutions that were directly attributed to the exchange tours. Nevertheless, at each of the case study institutions it was evident that support was essential to assist in implementing new systems and processes for sustained, long-term development.”* (See Appendix A)

Conclusion

One of the final efforts of the LPYL Project was to produce the booklet of 42 pages: *To Set the Ball Rolling (2002)*, covering many of the aspects of LPYL. This text can also be found on the website as a pdf-file. It gives the project a broader perspective by inviting key persons in Sweden and South Africa to contribute.

The LPYL Project has been a project on several levels. On the local level (project school level) the project has had many effects, as can be seen in the reports from visits to the schools.

The declared intention to sustain SCHELIS, the network of people in charge of provincial school library issues in each provincial department, initiated during Phase One of LPYL, will probably have a regional effect on future school library development.

The strength of LPYL was also supposed to be on a national level - with effects of professional interaction both nationally and internationally (Sweden - South Africa). A discussion about different aspects of north-south development projects has been initiated after the project. We have reason to believe that effects of this project can be lasting. A LPYL e-mail list, open to everyone interested in the ideas of the project has been started to make further contacts easier. Personal links have been established; contacts have already been taken and visits paid without any funding from LPYL and will hopefully continue to do so after the Durban IASL conference 2003.

References

Karlsson, J. Ed. (1996). *School learners and libraries: proceedings of conference on 28-29 November 1995 held at the Tropicana Hotel, Durban, Kwazulu Natal, South Africa*. Dalbridge: Education Policy Unit, University of Natal.

South Africa. Department of Education. Directorate: Centre for Educational Technology and Distance Education. (1998). *A national policy framework for school library standards*. Pretoria: The Directorate. Unpublished report.

Appendix A: Conclusions From The Evaluator Birgitta Alm

“You can say that this project is taking place on two scenes. One concrete and measurable in the different project schools and one mental insight and consciousness among those involved. In some cases, you can see a clear link between those two, when people, who have been inspired by new knowledge and new encounters have been working to realise them in practical work. In other cases, you can only have a feeling that something has taken root and could be developed if the soil will develop positively.

This project has been based on development of competence and exchange of ideas, experiences and knowledge during different meetings. All the strategic objectives have provided the participants with different kind of stimulation and competence, encounters of different kinds, such as:

- The encounters of the Project manager with people engaged in school library issues at the different project schools.
- The encounters between South African "school library people" with colleagues in Sweden and Swedish workplaces and working conditions as well as corresponding meeting in South Africa.
- The encounter of all school library heads from the provinces of South Africa.
- The encounters of public and school librarians in the community or neighbouring areas.

You may also add in the various seminars, conferences and workshops, which have been part of the project and which have contributed to an important development of competence amongst the participants and other people. All these meetings have resulted in different experiences and insights. Some of it is described in various travel, conference and project reports, where the LPYL participants, depending on different positions, have expressed what they have been inspired from and would like to develop in their own work. Samples of this personal inspiration and increased consciousness are to a certain extent documented in the evaluation report and in various appendices.

The different school libraries and schools have been the concrete scenes of the project work and in short you can say that a clear positive development has taken place at almost all the project schools. In some of the schools the status of the school library has increased in a splendid manner, in others, the development is modest and in one there has been no progress at all.

If you look at the mental and material elements mentioned above, the interesting thing is that you can see the obvious and constructive progress that has taken place despite the exposed position of material shortcomings of the schools. In my opinion, this indicates the importance of support and increased competence as well as stimulation.

The project has been about training and encouragement leading to positive effects.

The exchange tours in the project have been important stimuli and catalysts. When the visitors have stayed in their partner country the host country has tried very hard to present progressive plans and ideas. The South Africans have for instance become aware of school library committees, while Swedes have realised the advantages of making library plans.

The project has also had another important impact by initiating a national network of provincial school library heads, which has been institutionalised by the acronym SCHELIS.

The most important concrete outcomes that the project has provided on local school library level are in my opinion:

- The developing of different kinds of school library plans
- The formation of library committees
- The creation of local networks.

These outcomes are about:

Sustainability - aiming at structures and plans to make sure that what have been achieved must be taken care of and kept well;

Support among colleagues as well as in the organisational structure;

Dissemination through networks in order to provide mutual support and stimulation.

The elements of LPYL which I find have contributed to a positive outcome are:

- The carefully prepared strategy of working on three levels: national, provincial and local
- The concentration on "human development" regarding stimulating exposition to new ideas through study tours as well as knowledge development through seminars and workshops.
- The continuous support and advice, partly through competence development by provincial advisors, partly through recurrent visits by the Project Manager.
- The stimulation in a co-operative and co-ordinated work most of all initiated by networking of different kinds.
- The work to firmly establish the library in the school through committees and plans.
- The provision of basic, pedagogical school library material intended for mass distribution.

LPYL has in my opinion been a grand project. It is not one, but ten or twenty projects. Each project school and each single objective can be seen as a project of its own. That all the good efforts and the carefully prepared structure did not work out on all levels has both structural and human explanations. For instance, the role of school libraries has not been enhanced in the new curriculum. The "three-level" work lost ground during the second phase when the support from both provincial and national level was undermined. It would also have been desirable that the Project Manager might had had the chance to work until the project was really finalised - beyond the original time schedule of the project - to provide for all documentation.

However, these shortcomings are less important compared to the unique experience in which so many people met and exchanged experiences and insights. During five years many people with links to school libraries (about 70 actively engaged and a lot more involved and influenced) in two countries on different sides of the globe have expressed opinions, discussed, tested, exchanged wisdom and been engaged. The project members have obviously been involved in a process to develop democracy by providing reading and information resources to a potential pillar of democracy: the school library".

Birgitta Alm

School library consultant in Stockholm

Off duty information librarian at the International Library in Stockholm

1997 – 2000 librarian at a nursing school in Maputo, Mozambique

Appendix B: Stakeholders Of The Project

LIWO – Library and Information Workers’ Organization formed in Durban 1990 was working during the 1990s as an “Independent activist organization involved in social transformation. LIWO aims to provide the space for critical and constructive debate and projects and to bring together LIS practitioners of all kinds in an organization working towards an equitable, non-discriminatory information system accessible to all people in South Africa” (*from Statement of Intent*). LIWO members were in 1991 actively involved in the National Education Policy Investigation (NEPI) of the library situation in South Africa. LIWO was the South African partner in the project during Phase One (1997–2000)

EPU – Education Policy Unit (Natal) was established jointly by the University of Natal and the National Education Coordinating Committee (NECC) in 1987 to provide research for organisations working towards bringing about a democratic and non-racial system of education in South Africa. Through its activities EPU (Natal) works to empower national and provincial governments, non-governmental organisations and community-based organisations to develop education policies that promote democracy, equity and educational quality. EPU have been involved in Department of Education’s Policy Framework for School Library Standards and was in 1999 commissioned to draft the Implementation Plan for School Library Policy Framework. <http://www.nu.ac.za/departments/default.asp?dept=epuune> (2003-03-25) (*From presentation brochure from EPU*)
EPU was the South African partner in the project during Phase Two (2000–2002)

Centre for Educational Technology and Distance Education (CETDE) at the Department of Education in Pretoria has taken an active part of the LPYL project by having two representatives in the South African Reference Group and has facilitated and taken part of the meetings of SCHELIS. Department of Education formally endorsed Phase One of the project.

SCHELIS – a forum for the heads of school library support services in South Africa’s nine provinces. SCHELIS was formed 1997 as a result of LPYL and has been actively involved in the project on a consultative basis.

Bibliotek i Samhälle (BiS) (“Libraries in Society”) was formed 1969 in Sweden as a "politically independent organisation working on a socialist basis to promote progressive librarianship" (*from the program of BiS*). BiS has been actively involved in projects in South Africa for about ten years, during the early 1990s by supporting a resource centre in Lingelihle, the township of Cradock in Eastern Cape. In its periodical bis (quarterly), other issues relating to social commitments are also published. Website: <http://www.foreningenbis.org/>

Sida – Swedish Agency for International Development Cooperation. Sida has moved from aid to cooperation. Since the mid-1980s Sida has included culture in its activities. Sida’s Culture and Media Division has funded the LPYL as part of the Swedish government’s program for South Africa. Website: <http://www.sida.se/> (2003-03-25)

Appendix C: Working Groups:

South African Group

Phase One:

LIWO Working Group members: Johnny Jacobs, Jenni Karlsson, Thuli Radebe, Lyne Metcalfe
National department representatives: June Matlala, Busi Ndawo
IMC representatives (Part time project managers): Maureen Mosselson, Cathy Stadler

Phase Two:

School library - national level (2): June Matlala, Busi Ndawo
School library - provincial level: Lyne Metcalfe
School/public library - district level: Pat Magwaza
School/public library – practitioner level: Mrs Nomvuko Nomnga
Former LIWO Working Group: Johnny Jacobs
EPU executive director (representing the SA partner): Jenni Karlsson
Project manager: Jan Beeton (2000 – 2001)

Swedish Working group

Helen Amborn (School librarian) (Phase 1), Barbro Bolonassos (Public librarian), Catharina Engström (School/public librarian) (Phase 2), Bodil Hildeman (Public librarian (Phase 2), Lena Lundgren (County library consultant), Kerstin Rydsjö (Teacher Swedish Library School), Lennart Wettmark (High school librarian), Malin Ögland (School librarian) (Phase 2).

Appendix D: Some Of The Documents From The Project

Alm, Birgitta (2002). LPYL: Evaluation Report. Evaluation of phase 2 of the project Library Practice for Young Learners (LPYL). A joint project between Education Policy Unit (EPU) Natal and Bibliotek i Samhälle (BiS), Sweden, 2000 – 2002. Stockholm. Available <http://www.foreningenbis.org/lpyl/evaluation-phase2.htm> (2003-03-25)

Fifteen innovative ways with your learning resources. (1999). <http://education.pwv.gov.za/teli2/bisliwo.html> (2003-03-25) or http://www.foreningenbis.org/lpyl/booklet_text.htm (or a very big pdf-file on the website)

*Naiker, Santha & Mbokazi, Sandile. (2002.) *Developing libraries for South African learners and teachers. Three case studies.* Durban: Education Policy Unit (Natal).*

To Set the Ball Rolling - Library Project for Young Learners (LPYL) A Swedish – South African School Library Project 1997-2002. (2002). Available <http://www.foreningenbis.org/lpyl/LPYL.pdf>

More can be seen on the project website.

Three draft manuals with workshop guide:

- *Developing effective school library policy and planning.* (2001). Durban: LPYL (Book One, Library Practice for Young Learners Series). Draft edition
- *Using library related resources to improve the quality of teaching and learning.* (2001). Durban: LPYL. (Book Two. Library Practice for Young Learners Series) Draft edition
- *Using library related resources to develop the information skills of educators and learners.* (2001). Durban: LPYL (Book Three: Library Practice for Young Learners Series) Draft edition
- *Guide to facilitation of workshops for Book One, Two and Three in the Library Practice for Young Learners Series.* (2001). Durban: LPYL. Draft edition.

Biographical Notes

Maud Hell is working as school librarian in the primary and secondary school Vikingaskolan and in a branch of the public library of the university town of Lund in the south of Sweden. She has been host of South African participants of LPYL in Phases One and Two and took part in the study tour to South Africa in Phase Two. E-mail: maud.hell.vikingaskolan@skola.lund.se

Catharina Engström is specially working to help disabled persons using the library service of Kalmar in the south east of Sweden. She organised in Phase One the LPYL study tour in Kalmar for the South African participants of the project. During Phase Two she has been a member of the working group. E-mail: catharina.engstrom@kommun.kalmar.se

Lena Lundgren is working in Stockholm, the capital of Sweden. She is library consultant for the children and school library activity of the county of Stockholm, including meetings and education for librarians in 26 municipalities. She has been working with LPYL since the start as a member of the Swedish working group. E-mail: lena.lundgren@kultur.stockholm.se

Breaking Barriers to Literacy: Creating a Story Hour that Contributes to Reading Comprehension, Tolerance, and Multicultural Experiences

Eleanor B. Howe

Librarian

Pine-Richland School District

USA

Reading aloud to children is not only a very pleasurable experience but also an academic enrichment activity that helps equalize opportunities for all students by increasing their exposure to language, culture, and literature through a variety of vicarious experiences. After reviewing relevant professional literature, this paper presents a generic lesson plan that can increase children's listening and reading comprehension skills and thereby help break down the barriers between advantaged and disadvantaged students. Public librarians, school librarians, teachers, and parents can use the recommended read-aloud strategies to help all children increase their linguistic and social skills as well as their cultural awareness.

Reading aloud to children is a usually a very pleasurable experience for both the reader and the listener. It can also be an academic enrichment activity that helps equalize opportunities for all students by increasing the listeners' exposure to language, culture, and literature through a variety of vicarious experiences. If reading aloud can increase children's listening and reading comprehension skills, story hour can also help break down the barriers between advantaged and disadvantaged children, wherever they might be, by helping disadvantaged children increase their linguistic as well as social skills.

After a brief review of the relevant research, this paper will focus on practical recommendations for improving children's listening and social skills during story hour in the public library, school library, or at home. I have drawn these recommendations from the conclusions of research and the professional literature as well as my own experience reading aloud to elementary school children in kindergarten, grade one, and grade four.

Research on Reading Aloud and the Development of Language Arts Skills

Over the years researchers have repeatedly concluded that reading aloud correlates with children's success in school (Smolkin, Conlon, & Yaden, 1988; Strickland, Morrow, Feitelson, & Iraqi, 1990) and that "the single most important activity for building the knowledge required for eventual success in reading is reading aloud to children" (Anderson, Hiebert, Scott, & Wilkinson, 1985, p.33). Reading aloud had the additional benefit of creating "a pleasure connection between the child and print." (Trelease, 1995, p.46)

The professional literature and texts in the field of reading and reading instruction also support the interrelation of listening and reading skills. Several studies have concluded that reading aloud and instruction in listening skills can enhance both listening comprehension and the enjoyment of literature (Boodt, 1984; Brownell, 1986; Choate & Rakes, 1987; Friedman, 1986; Hanks, 1988; Howe, 2000; Lundsteen, 1971; Pearson & Fielding, 1982; Ringler & Weber, 1984; Simpson, 1986; Smith, 1963; Walcutt, Lamport & McCracken, 1974; and Warren & Fitzgerald, 1997).

Literacy research documents the benefits of reading aloud on:

- vocabulary
- general linguistic ability
- concepts of print and books
- sense of story structure and genre
- world knowledge,
- reading comprehension, and
- positive attitudes towards books and reading

(Burns & Roe, 1976; Cooter, 1991; Dennis & Walter, 1995; Elley, 1989; Fitzgerald, 1989; Howe, 2000; LeLoup & Stone, 1991; Meyer, Stahl, Linn, & Wardrop, 1994, 1994; Morrow, 1989; Rosenhouse, Feitelson, Kita, & Goldstein, 1997; Strickland et al., 1990; Trelease, 1995; Warren & Fitzgerald, 1997). The general conclusion is that reading aloud develops listening comprehension and language skills that children then utilize when reading by themselves.

This research and the practice of reading aloud are consistent with Vygotsky's theory of literacy as developing in social contexts with modeling and guidance by adults (Morrow, 1989; Rosenhouse et al., 1997). Story hour aloud is definitely a social activity in which adults can model appropriate language and social behavior, present a variety of literary experiences, and guide comprehension. The research and Vygotsky's theory are also consistent with the testimony of many authors around the world and from all social backgrounds that their parents read aloud to them frequently when they were children and that they thereby gained a love of story and an ability with language.

Because of these findings, schools have encouraged parents and teachers to read aloud to their children every day, and articles in journals for librarians promote reading aloud in the library (Burns & Flowers, 1997; Cart, 1996; Freeman, 1992; Guardia, 1995; Hilchey-Chandler, 1997; Kids & reading, 1996; LeLoup & Stone, 1991; Mazzoco, 1993; Trelease, 1995; Wells, 1993; Wiley, 1996; and Wilson & Brown, 1999). It would be difficult to escape the conclusion from all the evidence that a program of reading aloud to students of all backgrounds would tend to equalize the language skills of all students, including those from language-deprived or second-language homes.

A read-aloud program will be of greatest benefit to disadvantaged children if it begins before they enter school and continues at least through ages ten or eleven because listening comprehension is greater than reading comprehension until children are in grades five or six (Pearson & Fielding, 1982). Reading aloud therefore offers pre-teen children an important venue for content learning as well as social, linguistic, cultural, and literary learning. These benefits may even extend to secondary school students. A teacher recently told me that students in a high school summer English course enjoyed being read to and became quite engaged in the story. The K-12 Junior Great Books program, moreover, begins its consideration of each literary selection by reading it aloud; students then read it silently before participating in the shared inquiry discussion (Great Books Foundation, 1999).

There are, however, two important considerations with regard to the correlation between reading aloud and language arts skills. One is how the story is read aloud: is it just read aloud or is it read effectively? The second is the selection of stories to be read: are they quality literature or are they excerpts from a basal reader? Both of these factors have an important impact on the development of language arts skills in listeners.

With regard to reading aloud effectively, one study (Hoffman, Roser, and Farest, 1988) found that many teachers tended merely to read aloud and employed few techniques to improve student involvement and comprehension. After training in seven read-aloud strategies, these teachers incorporated many of these strategies into their story hour with the result that the average time for story hour increased from 10 to 23 minutes. The researchers noted evidence of a greater level of student engagement and participation when these techniques were used, but unfortunately they did not explore whether there was also enhanced learning (Hoffman, Roser, Farest). It is generally accepted, however, that greater student involvement and participation does lead to greater learning.

With regard to story selection, readers should choose stories that offer both something familiar and something new for students to learn in curricular content, linguistic and social skills, and cultural experiences. Stories with character development and differentiation, interesting settings, enjoyable language, and an engaging plot line offer the opportunity for listeners to become familiar with story structure and meaning. Discussion can stimulate and reinforce the

comprehension of these literary elements as well as vocabulary, content, and main ideas. The stories selected for inclusion in the Junior Great Books program also offer opportunities for interpretation (Great Books Foundation, 1999).

Strategies for Reading Aloud Effectively

There are several read-aloud strategies that librarians, teachers, and parents can use to increase not only the enjoyment of all listeners but also their listening and reading comprehension, social skills, tolerance, and multicultural experiences. The following recommendations flow from my own research project, from the professional literature and practicing librarians, and from my experience reading aloud in the school library.

1. Ensure That Story Hour is an Enjoyable and Literary Experience

Revisit and keep always in mind that the goals of story hour at home or in the school or public library are to develop

- a love of reading and literature,
- an appreciation for language, and
- a positive feeling for the library (Hilchey-Chandler, 1997).

Select age-appropriate quality literature that both the reader and children will enjoy. Exposure to quality literature helps develop general linguistic abilities as well as literary appreciation. Elements of enjoyment can come from the topic, theme, writing style, rhyme, characters, plot, setting, illustrations, and humor. Develop lists of titles that illustrate each of these literary elements as well as the variety of cultural genres such as fables, folktales, and legends. Children also love familiarity.

Reading several stories from a series they like or rereading a favorite story brings the enjoyment of revisiting a pleasurable experience and may also improve comprehension (Rosenhouse et al., 1997).

2. Create an Environment That Promotes Active Listening

Research has documented the importance of the reader's personality and the ambiance of the room in helping children feel comfortable and engaged. The reader should convey personal warmth with eye contact, a positive expression on the face, a relaxed and open body posture, attractive attire, and positive words (Brownell, 1986). A stimulating but warm and comfortable physical environment enhances both listening comprehension and participation (Brownell, 1986; Burns & Flowers, 1997; Freeman, 1992). Removing visual and aural distractions will help demonstrate that the activity is important and keep listeners focused on the story (Brownell).

A structure and rules for story hour help children listen, learn, and practice appropriate social behavior. The reader should model desirable social behavior and set clear expectations for the children's behavior before, during, and after the story. It is important for the reader to treat each listener with dignity and to model polite language and consideration for all listeners (Callison, 1999). Basic courtesy expected of the children includes listening to others (no speaking while another speaks), raising a hand before speaking, and making only positive comments about others' opinions. The Junior Great Books shared inquiry discussion method builds on this approach with its own specific guidelines (Great Books Foundation, 1999).

3. Develop an Age-appropriate Topic for Each Story Hour

A topic for each story hour provides coherence to the whole program and unity to the individual session that may include a variety of genres. Topics can focus on

- the school curriculum,
- personal and social skills,
- multicultural experiences, and
- literary elements.

Selecting stories related to topics students are studying in the classroom reinforces learning in school and offers the reader an opportunity for collaboration with teachers. Social topics may focus on desirable behaviors such as respect, responsibility, courtesy, honesty, kindness, and tolerance. Multicultural topics may also include a variety of local and international cultural celebrations and folktales. Literary topics may include stories that emphasize a character, others that emphasize setting, and still others that emphasize plot and conflict. Select some stories or fables that are noted for their theme. Even young listeners can discuss social values and behavior, character, plot, setting, or theme after listening to a story.

4. Pre-read Every Selection Before Reading It Aloud

This enables the reader to decide how to introduce and read the story aloud, which literary, cultural, social, and/or curricular elements to emphasize, and which post-listening activities are most relevant (Burns & Flowers, 1997; Cooter, 1991).

5. Use a Generic Lesson Plan That Enhances Listening and Comprehension

Research provides some general recommendations about which techniques readers can use before, during, and after reading aloud (Howe, 2000; Rosenhouse et al., 1997). What appears to be significant for listening comprehension during story hour are

- expressive reading that encourages attention to and interaction with the material (Morrow, 1989; Scollon, 1988) and;
- activities that encourage interest, review, and analysis (Howe; Morrow; Rosenhouse et al.).

Merely reading aloud may or may not be effective in developing language skills (Morrow; Strickland et al., 1990; Warren & Fitzgerald, 1997).

The following generic lesson plan of story hour activities is based on a lesson plan developed for a research project on the contribution of listening comprehension skills to reading comprehension skills (Howe, 2000). It includes Brownell's (1986) recommendations for improving listening and thinking skills with the HURIER model (Hearing, Understanding, Remembering, Interpreting, Evaluating, and Responding). It uses indirect teaching techniques that encourage the attention, interaction, and review that are essential to both listening and reading comprehension. The lesson plan model is also consistent with the pre-reading, during-reading, and post-reading activities used by children who are expert readers (Callison, 1999). Those who read stories aloud can adopt and model some of these same activities for listeners in order to enhance their comprehension.

a. Pre-listening Activities

Get the students' attention and get rid of distractions (Brownell, 1986; Burns & Flowers, 1997; Freeman, 1992). Then stimulate their interest by

- ✓ referring to previous stories, personal experiences, or knowledge,
- ✓ generating curiosity about the current topic or title, or
- ✓ setting a purpose (Callison, 1999; Rosenhouse et al., 1997).

These activities get children's attention and activate the prior knowledge and interest necessary for comprehension.

b. During-listening Activities

Always present the story in ways that sustain attention and enhance listening comprehension:

- ✓ maintain eye contact,
- ✓ read with expression,
- ✓ infer and model prosody, and
- ✓ define new or unusual words as you read them (Brownell, 1986; Callison, 1999; Cooter, 1991; Elley, 1989; Freeman, 1992; Rosenhouse et al., 1997).

Optional activities include

- making summaries or predictions at key points (Cooter, 1991; Hoffman, Roser, & Farest, 1988);
- encouraging students to visualize by giving them the time and purpose to close their eyes (Brownell, 1986);
- providing a few props that represent characters, themes, plot, or setting (Cooter, 1991; Wilson & Brown, 1999);
or;
- encouraging students to participate in repetitive story language (Freeman, 1992; Tompkins & McGee, 1989; Wilson & Brown, 1999).

Pre-reading the story will help you select those optional activities most appropriate for each title. While these activities keep children attentive and develop their linguistic abilities, it is important not to let the number or duration of such activities break the continuity or enjoyment of the story. At least one experienced pre-school story reader prefers not to allow any interruptions to the story itself (Mazzoco, 1993), and the omission of illustrations and props may have a positive effect on children's imaginations (Strickland et al., 1990).

c. Post-listening Activities

These include a discussion of the story and an age-appropriate related creative activity. When posing a question, be sure to allow adequate wait-time so that most students have time to complete their thoughts before calling on one (McKay, 1988). Enhance comprehension by asking the children to

- ✓ summarize or retell the story (Brownell; Dennis & Walter, 1995; Morrow, 1989; Paris, Wasik, & Van der Westhuizen; Rosenhouse et al.; Schmitt);
- ✓ consider literary elements and structure such as character, plot, setting, style, and mood (Gordon, 1989; Nelson-Herber & Johnson, 1989; Schmitt, 1988);
- ✓ identify the topic and main idea (Brownell, 1986; Callison, 1999; Duffelmeyer & Duffelmeyer, 1987; Paris, Wasik, & Van der Westhuizen, 1988; Rosenhouse et al., 1997; Warren & Fitzgerald, 1997); or
- ✓ interpret a character's actions, feelings, or motivations (Great Books Foundation, 1999).

The Junior Great Books program and its recommended discussion methods distinguish between questions that are

- factual (those with a definitive answer in the text),
- interpretive (those with answers that are text-based but with more than one possible answer), and
- speculative (those with answers that are not text-based).

While all types of questions can be asked, the program's shared inquiry discussion focuses on interpretive questions and a structure in which the leader can only ask, not answer, questions (Great Books Foundation, 1999). Such discussions encourage participation and develop higher order thinking skills in listeners and readers. They may also increase social knowledge and skills since many interpretive questions involve an explanation of a character's behavior, feelings, or motivation. The shared inquiry method can be used with age-appropriate readings for children from kindergarten to grade 12 (Great Books Foundation, 1999).

The goal of these post-listening discussions is to develop a sense of story structure, main idea, and interpretation through a brief review. One discussion topic may be enough for each story, especially with primary students, and sometimes they may be omitted so as to avoid over-analyzing (Guardia, 1995; Nelson-Herber & Johnston). Although analytical discussion facilitates comprehension, story hour should remain fun and not become an obvious lesson (Freeman, 1992).

A post-listening creative activity related to the story encourages personal expression and improves the retention of what is heard (Brownell, 1986). The educational benefits of artistic activities include the development of eye-hand coordination and small motor skills, following directions, and using geometric shapes. Written creative activities enhance the understanding of literary elements and reinforce skills in vocabulary, spelling, and grammar. Provide a variety of creative activities that encourage different types of talents—manipulative, musical, linguistic, and artistic.

You may also want to have the children create a long-term project that they work on at various times throughout the year. In kindergarten, for example, children can create their own ABC book, with one letter as the topic of a story hour

and of a page in the book. In first grade they can create a book of the months or seasons. After listening to a story related to the current season or month, they may draw a picture of what a character did during that time of year or their own favorite seasonal activities. Including annual holidays and celebrations in the book will increase multicultural awareness.

The challenge for the reader is to select an age-appropriate number and type of these pre-, during-, and post-listening activities that are most relevant for each title, for the particular students, and for improving cultural awareness and listening comprehension by increasing vocabulary, identifying the main idea, and understanding the organization and literary aspects of the story. This offers an opportunity for readers to be creative and to collaborate with teachers on the selection of these activities.

The use of different pre-, during-, and post-listening activities provides variety within a consistent structure that enhances listening comprehension. The goal for story hour is the introduction or reinforcement of listening skills with a few questions rather than direct instruction (Gordon, 1989; Nelson-Herber & Johnston, 1989).

6. Enjoy the Stories, the Experience of Reading Aloud, and Being With Children

The reader's enthusiasm for literature, creative activities, and children is contagious!

Conclusions

One way of achieving our goal of breaking down the barriers between advantaged and disadvantaged students is for librarians to offer programs that help all students to develop cultural awareness and proficiency in language and social skills. Story hour provides an opportunity to offer children many positive linguistic, literary, cultural, and social experiences. Children can learn social skills and respect for others while listening to and discussing stories if there are clear expectations for their behavior and a good role model. The stories selected for reading can contribute to tolerance and multicultural experiences if they include those titles that increase children's exposure to their own and other cultures with respect for the differences between people. The professional literature does support the correlation between listening and reading comprehension skills.

In order to contribute to all children's learning and enjoyment during story hour, readers should employ effective indirect teaching strategies. The preceding recommendations are based on teaching and learning strategies that improve listening and reading comprehension, and they are consistent with what researchers and theorists have learned about listening comprehension, reading comprehension, pedagogy, and cognitive development. They also offer an opportunity for public and school librarians to collaborate with teachers to improve student learning and enjoyment of story hour.

Although readers who use the generic lesson plan for story hour may not see the resulting enhanced listening skills documented by research, they may nonetheless feel assured that they have contributed to the increased linguistic ability, listening and reading comprehension skills, literary and cultural appreciation, and cognitive and social development of their students—all while the children think they are just listening to a story!

References

- Anderson, R.C., Hiebert, E.H., Scott, J.A., & Wilkinson, I.A.G. (1985). *Becoming a nation of readers: The report of the Commission on Reading*. Washington, DC: The National Institute of Education, U.S. Department of Education.
- Boodt, G.M. (1984). Critical listeners become critical readers in remedial reading class. *The Reading Teacher*, 31, 390-394.
- Brownell, J. (1986). *Building active listening skills*. Englewood Cliffs, NJ: Prentice-Hall.
- Burns, M.M., & Flowers, A.A. (1997). Have book bag, will travel: A practical guide to reading aloud. *The Horn Book*, 73, 182-89.

- Burns, P.C., & Roe, B.D. (1976). *Teaching reading in today's elementary schools*. Chicago: Rand McNally.
- Callison, D. (1999). Key words in instruction: Content literacy. *School Library Media Activities Monthly*, 16(3), 38-39ff.
- Cart, M (1996). Carte blanche: The paradigms, they are a-shifftin'. *Booklist*, 92, 805.
- Choate, J.S., & Rakes, T.A. (1987). The Structured Listening Activity: A model for improving listening comprehension. *The Reading Teacher*, 41, 194-200.
- Cooter, R.B. (1991). Storytelling in the language arts classroom. *Reading Research and Instruction*, 30(2), 71-76.
- Dennis, G., & Walter, E. (1995). The effects of repeated read-alouds on story comprehension as assessed through story retellings. *Reading Improvement*, 32(3), 140-153.
- Duffelmeyer, F.A., & Duffelmeyer, B.B. (1987). Main idea questions on informal reading inventories. *The Reading Teacher*, 41, 162-165.
- Elley, W.B. (1989). Vocabulary acquisition from listening to stories. *Reading Research Quarterly*, 24(2), 174-187.
- Fitzgerald, J. (1989). Research on stories: Implications for teachers. In K.D. Muth (Ed.), *Children's comprehension of text: Research into practice* (pp. 2-36). Newark, DE: International Reading Association.
- Freeman, J. (1992). Reading aloud: A few tricks of the trade. *School Library Journal*, 38 (July), 26-29.
- Friedman, P.G. (1986). *Listening processes: Attention, understanding, evaluation*. Washington, DC: NEA Professional Library.
- Great Books Foundation. *An Introduction to Shared Inquiry: A Handbook for Junior Great Books Leaders* (4th ed.). Chicago: The Great Books Foundation, 1999.
- Guardia, F. (1995). Other voices: Teenagers who don't read. *Bookbird*, 33 (3-4), 47-48.
- Gordon, C.J. (1989). Teaching narrative text structure: A process approach to reading and writing. In K.D. Muth (Ed.), *Children's comprehension of text* (pp. 79-102). Newark, DE: International Reading Association.
- Hanks, W.E. (1988). Critical listening promotes understanding of TV news. *Journalism Educator*, 42, 13-15.
- Hilchey-Chandler, D. (1997). Don't cling to crafts! *School Library Journal*, 43 (February), 45.
- Hoffman, J.V., Roser, N.L., & Farest, C. (1988). Literature-sharing strategies in classrooms serving students from economically disadvantaged and language different home environments. In J.E. Readance & R.S. Baldwin (Eds.), *Dialogues in literacy research: Thirty-seventh yearbook of the National Reading Conference* (pp. 331-337). Chicago: National Reading Conference, Inc.
- Howe, E.B. (2000). The Relationship Between Listening Comprehension and Reading Comprehension: Implications for Reading Aloud and Learning. In Howe, Ed. *Developing Information Literacy - Key to the Future: Papers Presented at the Fourth International Forum on Research in School Librarianship and Proceedings of the Conference*. Seattle, WA: International Association of School Librarianship: pp. 57-73.
- Kids and reading: Reading aloud to children. *Emergency Librarian*, 23 (May-June 1996), 67-68.
- LeLoup, D., & Stone, E. (1991). Classroom connections: Collaborating with the library media specialist on reading aloud. *Indiana Media Journal*, 14 (Fall), 11-14.

- Lundsteen, S.W. (1971). *Listening: Its impact on reading and the other language arts*. Urbana: NCTE/ERIC.
- Mazzoco, M. (1993). *The magic of reading aloud*. *Journal of Youth Services in Libraries*, 6 (Spring), 312-314.
- McKay, M.J. (1988). Extended wait-time and its effect on the listening comprehension of kindergarten students. In J.E. Readance & R.S. Baldwin (Eds.), *Dialogues in literacy research: Thirty-seventh yearbook of the National Reading Conference* (pp.225-233). Chicago: National Reading Conference, Inc.
- Meyer, L.A., Stahl, S.A., Linn, R.L., & Wardrop, J.L. (1994). Effects of reading storybooks aloud to children. *Journal of Educational Research*, 88 (2), 69-85.
- Morrow, L.M. (1989). Using story retelling as a story structure. In K.D. Muth (Ed.), *Children's comprehension of text: Research into practice* (pp. 37-58). Newark, DE: International Reading Association.
- Nelson-Herber, J., & Johnston, C.S. (1989). Questions and concerns about teaching narrative and expository text. In K.D. Muth (Ed.), *Children's comprehension of text: Research into practice* (pp. 263-280). Newark, DE: International Reading Association.
- Paris, S.B., Wasik, B.A., & Van der Westhuizen, G. (1988). Meta-cognition: A review of research on metacognition and reading. In J.E. Readance & R.S. Baldwin (Eds.), *Dialogues in literacy research: Thirty-seventh yearbook of the National Reading Conference* (pp. 143-166). Chicago: National Reading Conference, Inc.
- Pearson, P.D., & Fielding, L. (1982). Research update: Listening comprehension. *Language Arts*, 59, 617-629.
- Ringler, L.H., & Weber, C.K. (1984). *A language-thinking approach to reading: Diagnosis and teaching*. New York: Harcourt Brace Jovanovich.
- Rosenhouse, J., Feitelson, D., Kita, B., & Goldstein, Z. (1997). Interactive reading aloud to Israeli first graders: Its contribution to literacy development. *Reading Research Quarterly*, 32 (2), 168-183.
- Schmitt, M.C. (1988). The effects of an elaborated directed reading activity on the metacomprehension skills of third graders. In J.E. Readance & R.S. Baldwin (Eds.), *Dialogues in literacy research: Thirty-seventh yearbook of the National Reading Conference* (pp. 167-181). Chicago: National Reading Conference, Inc.
- Scollon, R. (1988). Storytelling, reading, and the micropolitics of literacy. In J.E. Readance & R.S. Baldwin (Eds.), *Dialogues in literacy research: Thirty-seventh yearbook of the National Reading Conference* (pp. 15-33). Chicago: National Reading Conference, Inc.
- Simpson, M.K. (1986). A teacher's gift: Oral reading and the reading response journal. *Journal of Reading*, 30, 45-50.
- Smith, N. (1963). *Reading instruction for today's children*. Englewood Cliffs, NJ: Prentice Hall.
- Smolkin, L.B., Conlon, A., & Yaden, D.B. (1988). Print salient illustrations in children's picture books: The emergence of written language awareness. In J.E. Readance & R.S. Baldwin (Eds.), *Dialogues in literacy research: Thirty-seventh yearbook of the National Reading Conference* (pp. 59-68). Chicago: National Reading Conference, Inc.
- Strickland, D.S., Morrow, L.M., Feitelson, D., & Iraqi, J. (1990). Storybook reading: A bridge to literary language. *The Reading Teacher*, 44(3), 264-265.
- Tompkins, G.E., & McGee, L.M. (1989). Teaching repetition as a story structure. In K.D. Muth (Ed.), *Children's comprehension of text: Research into practice* (pp. 59-78). Newark, DE: International Reading Association.
- Trelease, J. (1995). Reading aloud for reading readiness. *Journal of Youth Services in Libraries*, 9 (Fall), 43-53.

Walcutt, C.C., Lamport, J., & McCracken, G. (1974). *Teaching reading: A phonetic/linguistic approach to developmental reading*. New York: Macmillan.

Warren, L., & Fitzgerald, J. (1997). Helping parents to read expository literature to their children: Promoting main-idea and detail understanding. *Reading Research and Instruction, 36*(4), 341-360.

Wells, R. (1993). "The most important twenty minutes of your day!": Promoting reading aloud to children. *The Horn Book, 69*, 307-310.

Wiley, N. (1996). Back to reading: AASL initiative emphasizes reading. *Kentucky Libraries, 60* (Spring), 3-7.

Wilson, P.P., & Brown, S. (1999). Creating story aprons for library and classroom use as visual aids for reading aloud. *School Library Media Activities Monthly, 16*(3), 26-28.

Biographical Note

Eleanor B. Howe, Co-Chair of the Library Department at the Pine-Richland School District in the greater Pittsburgh USA area, has presented sessions and published articles at the local, state, national, and international levels. She has also taught at Clarion University and is currently Chair of the IASL Research Special Interest Group. After earning the M.S.L.S. and M.Ed. degrees, she has served as librarian from grades kindergarten to 12 in public and private schools and has taught in both libraries and computer laboratories. Her major interest lies in developing library programs that contribute to student learning.

Susan La Marca

PhD Student – University of Melbourne
Australia

This report is an analysis of the role of the teacher librarian, as an enabling adult, in creating a reading environment within a secondary school library. It will briefly discuss the major factors that impact upon this role. The identified factors are:

- *Attitude*
- *Relationships*
- *Library Organisation*
- *Access*
- *Ambience*
- *Professional debate*

The study

The concept of the reading environment, as it is created in a secondary school library by the teacher librarian, is fundamental to this study. This is an elusive idea though; the term reading environment does not refer to a clearly marked physical space, it is not governed by a set of guidelines or rules. In essence a reading environment within a school library is the atmosphere that is created that encourages young people to read. Aidan Chambers discusses the term in his book *The Reading Environment*:

All reading has to happen somewhere..... But it isn't only a matter of place - setting. It is also a matter of having books we want, and what mood we're in, and what time we've got, and whether we're interrupted. Not to mention our general attitude to reading (whether or not it is something we enjoy for its own sake) and why, particularly, we are reading at that moment (as a work duty, or for private pleasure). These are some of the things that influence us. They make up the social context of reading. (Chambers, 1991, p.7)

In a secondary school library a reading environment is this and much more. An analysis of factors that impinge upon, or contribute to, the creation of an effective reading environment form the major focus of this research.

The crucial factors are:

- The attitudes of the teacher librarian
 - towards reading and their students as readers
 - to reading promotion as part of the library program
- The relationships between the teacher librarian and all members of the school community, teachers and students
- Library organization
 - access
 - advisory role
 - the knowledge base

- policy
 - collection management
 - library reading programs
 - ambience
 - library layout
 - display
- External constraints
 - budget allocations
 - support from school administration
 - staffing
 - the architecture of the library
 - the pressures of the curriculum
 - Professional debate

To enable analysis of these factors data was collected from six schools of varied types, though all suburban, predominantly through interviews. The primary source of data was the teacher librarian in each school.

As space is an issue in this report I have chosen to discuss only some of the major factors in relation to the relevant literature using small samples of the collected data as illustration.

The Secondary School Library Reading Environment

It is the interaction between all influences that is crucial to our understanding of what a reading environment is. In reality, the creation of any reading environment is the result of the interplay between a myriad of important, interconnected factors that must be juggled and understood by the key players.

Attitudes

“Children learn about literature from what the adults around them do about it” (Zahnleiter, 1985, p. 187).

How teacher-librarians see themselves, their knowledge base, motivation, interest in encouraging reading, whether they see this as part of their role; all of these factors appear to influence what takes place within the school library.

Smart, reflecting on the literature in relation to the success of libraries, states it is the “the people who staff the libraries who make them successful or otherwise” (Smart, 1985, p. 66). Having reviewed current research Smart claims it is the people factor, the faces that greet the library users, that make or break the quality of the service. This is part of what is termed here attitude.

How teacher librarians perceive their own role as a teacher librarian. How teacher librarian perceive their function within the wider school community, and their attitude towards the different roles that the library may fulfill in relation to reading promotion. How they see their students as readers. It is these attitudes that will contribute to the success of the library and perhaps determine the type of library service. The research data shows various attitudes from welcoming and interested to preoccupied and disinclined.

I have a book that I write down everything I read in. The kids ask for it they seem to like it. I've started up a stand of good books to read and they know that that is a constant reference point for them for books that I have liked.

School One – Teacher Librarian

I think we have a role to play in promoting it and promoting the idea that reading is, is something that is worthwhile and why don't we listen to one another, why don't we talk.

School Six – Teacher Librarian

I was told by the then Head of Library that the girls were all really good readers and that English looked after sort of the reading scheme stuff, and that the library really was just for recreation, and that you really had to do nothing to promote reading because the girls read.

School Six – Teacher Librarian

We have to move down that technology road here and ultimately I think reading will suffer.

School Two - Library Technician

I think it really comes back to what you think the function of a school library actually is. I do not believe that it is a primary function of a school library to provide extensive pleasure reading for kids. I think that actually that function is taken up quite well by community libraries.

School Two – Vice Principal

Frankly they didn't read before and they don't now. Well they do a bit.

School Three – Teacher Librarian

What I am doing is what I am trying to do most of the time.

Information literacy is what I am on about. Promoting reading is for me a secondary thing.

School Three – Teacher Librarian

Attitudes directly impact on the reading environment itself, as the views of the teacher-librarian greatly influence what they ultimately create. Historically the stereotypical perception of the librarian has been one of an isolated, difficult individual, not one who is concerned with welcoming and encouraging readers and library users in general. In an article by Fein (1996) the following was said of the library and the librarian:

... the major dislike was the quiet and having to be quiet and the second thing they disliked was the librarian, characterised as 'old', 'rude', 'mean', 'cranky', 'pushy', 'weird', etc. The telling quote, used - 'she thinks that the world revolves around 'her' library. It's mine, too.' (Fein, 1996, p. 23)

It is, of course, a generalisation to assume that all library workers either act like this, or, are perceived in this way. Nevertheless these views must be recognised as the possible perceptions of members of any school community. Such views can impact upon the way in which teacher librarians view themselves, and perhaps, affect attitudes.

A 'good' teacher librarian is the antithesis of many of these descriptive phrases. Dynamic, confident, interested and personable, these attitudinal traits are important in any field of work where quality interpersonal relationships are necessary. Hartzell (1999), discussing how teacher librarians must strive to influence others, looks at the need for confidence in ourselves. Haycock reports from research that "Teacher librarians who are less cautious and more extroverted tend to be more successful" (Haycock, 1989, p. 9). Altmann refers to this quality as "personal enthusiasm" (1994, p 5).

Attitudes inform practice and support endeavours in all areas of any workplace's operations. DeGroff in a national American survey found that: "Survey responses reveal that people are at the heart of successful working relationships. Funding, curricular mandates, building or individual policies were important, but less so than knowledgeable, personable people with appropriate attitudes and interests" (1997, p. 17)

Phillips said: "The three great intangibles of school librarianship are image, personality and atmosphere. The three are interrelated, but in probably no other profession are they so important" (1988, p. 25)

The attitude of the teacher librarian is of prime importance to this study and a crucial factor in the framework for analysis (see diagram at the end of paper).

Relationships

"Teacher librarians must work on building relationships as consciously as they work on building collections" (Hartzell, 1999).

The term 'relationships' encompasses all of the interconnecting professional relationships formed by teacher librarians in attempts to carry out programs they have devised and to successfully manage libraries. This area cannot be underplayed, as the role of the teacher librarian, in all aspects of their work, depends enormously on the professional relationships that are formed with teaching staff, library staff, and administration. Most important, also, is the relationship formed with students.

Todd (2000) describes a recent study undertaken in Sydney which sought to identify "the core knowledge and skills librarians would need to possess in order to effectively undertake a knowledge management role" (2000). These were found to include: "People skills, such as team work, ability to cooperate with other kinds of professionals, building trust relationships, alliances building, conflict resolutions and negotiation, motivation and perseverance" (p.106)

Relationships with Teachers

The relationship formed between teachers and the teacher librarian is a complex pattern of both formal and informal interactions that at its best can be rewarding and at its worst very destructive. The data illustrated a variety of relationships, some positive and rewarding, others destructive. There was a marked problem in many of the schools with a lack of cooperation between library and English in regard to reading promotion. Some representative pieces:

Well the relationships you have with teachers is very crucial to whatever you do. So if I had to give priority to any one thing that I do it would have to be my support for teachers and what they do. It could be literature it could be research but I will work with them. So that's where my priority is because I find that in the long run that pays the greatest dividend.
School Six – Teacher Librarian

I trust or know that she [the Teacher Librarian] has got training that I haven't got – I respect and trust that and I want her to be able to express that.I'm happy to come with questions and bounce ideas off her.
School One – Teacher

...it (the library) can do its best to promote reading but if the English department isn't there then it's a lesser program, and it works the other way, I'm not saying there wouldn't be something but without the other but it would be a lesser program.
School Six – Teacher

In the fiction areas we are at the moment sitting down with English and asking what do you want. Until they get themselves organized we are a little at a loss.
School Two – Teacher Librarian

Good relationships were based on mutual respect and a willingness to work together. Destructive examples, of which there were more, were marked by all parties attempting to claim reading promotion was the other parties responsibility.

Worthy has said: "To remove the barriers to voluntary reading, it is vital that librarians and teachers pool their resources and expertise, the librarians sharing their knowledge....both groups working together to provide access" (1996, p. 491).

In an ideal environment this picture of co-operation and sharing would be evident. Baker recognises the myriad of problems that can beset good working relationships. He states:

Too often a school's library-media program and its reading program exist together in a more or less permanent state of discomfort. Whether the discomfort is acute or mild depends upon personalities, budgets, status, and 101 other things that make a school the anthill of activity that it is. (1980, p. 163)

The 'discomfort' that Baker alludes to can be very destructive of an effective reading environment in a school library.

Relationships with Students

A positive, effective relationship between the teacher librarian and students is central to a successful reading environment. Any reading environment is only successful if it manages to bring books and young people together. This relationship, in which books may be discussed, recommended and shared, both formally and informally, is often the most difficult and the hardest to establish. Within the case study scales relationships ranged from good to non-existent and stemmed from the primary attitude of the teacher librarian towards their students as readers and their own role as an enabling adult.

These statements illustrate either end of the spectrum:

Give the kids confidence, help them, talk to them and help. She's really kind. She'll talk to you and ask you what you like. That's important.

School One - Student

We don't really see the library staff much, we just pick up the book and they stamp it out. Maybe in year seven you might see them more.

School Six - Student

Scales, in her interview with Atkinson, for the 1997 Grolier award, was asked to elaborate on her ideas about reading and promoting reading, she said: "I'm afraid we want formulas to get kids to read - and bells and whistles. It doesn't take that; it takes building a relationship with students, and it takes turning reading into an experience" (Atkinson, 1997, p. 114).

Engaging students, bringing them into Chambers' reading circle, is a constant thread through the writing of those who have commented upon this relationship between teacher librarian, or teacher, and student. Many other commentators agree, seeing relationship building between adult and student as crucial (see, e.g., Carter, 1987, p. 187; Holland, 1994, p. 81; Leonhardt, 1998, p. 4). There is a role for the teacher librarian to play here. Often, it is the teacher librarian who has the time to develop this relationship, the teacher librarian who has the knowledge and the books at hand. It can be an advantage to not be a classroom teacher hindered by curriculum requirements and assessment criteria and able to work at helping students connect with books in a more relaxed, assessment free environment.

Relationships with Administration

The relationship between the teacher librarian and administration is important. Most teacher librarians operate autonomously, but they are answerable to administration, in some form, in most schools, particularly for matters such as staffing and finances. Hartzell argues that teacher librarians often have difficulty achieving what they want to due to poor relationships with administration (1997, p. 2). Oberg (1996) in a study on principal support of teacher librarians found:

Research shows that although teacher librarians generally view Principal support as critical to the success of the library program (Haycock, 1992), they often have low expectations of Principal support (Lewis, 1991, Campbell 1991) and rarely engage in the kind of activities that would increase the Principal's understanding and support (Edwards, 1989). (Oberg, 1996. p. 109)

This understanding, referred to by Oberg, can best be established by building strong professional relationships between the teacher librarian and administration. Oberg's view of the research indicates, though, that this is one area where a great deal of work needs to be done on both sides of the potential relationship before an effective working relationship can be achieved.

Library Organisation

Access

“There is a great deal of evidence showing that children with more access to books read more” (Krashen, 2002, p.2).

We have a problem that things will get pinched or bits ripped out. If we've got the stuff that's hot enough to read we have to lock it away and handle it carefully.

School Three – Teacher Librarian

In a paper entitled 'Building student learning through school libraries' at the American White House Conference on School Libraries in June 2002, Smith outlined the five essential elements she had identified as needed to create a 'community of scholars' through the power of the library. Number one on her list was: access. Smith argued that, as part of the function of providing good access, libraries should be “available, warm, and welcoming places”(2002, p. 2).

Novljan argues that free access to books is 'a basic requirement for reading' (1993, p. 104). Certainly Chambers' (1991) reading circle and the work of others in this area (Altmann, 1994) emphasize the importance of books that are available and accessible to students. This brings into discussion the teacher librarian's selection guidelines and process - what books does he or she buy and why? Are they kept where the students can get to them? Are students allowed to browse the collection out of class time? Can they borrow when and what they choose? These are crucial questions, influenced by the teacher librarian's attitude towards his or her readers and the collection, and also by external factors such as funding.

Teacher librarians have the means at their fingertips for making reading material accessible. It is a matter of decision making, informed by policy that is based on their attitudes of what a library should be, that ultimately determines what types of access students will have to what they hope to find.

Advisory role of the teacher librarian

"The teacher librarian has the specialised knowledge of reading material which classroom teachers may lack and can offer the guidance that teachers often do not" (Moloney, 2000, p. 102).

All research respondents recognised the importance of their role as advisor yet not all were willing to fully wear this mantle. Those who saw it as part of their role relished the role to the benefit of their students.

She can aim books at different students and tends to informally discuss books with students. I think that that is important for another reason as well - it creates that atmosphere, it's got to be a comfortable place.

School One - Teacher

We don't have a regular program of talking to the classes, we don't unless we are asked. Perhaps it's something we should do, but perhaps with time constraints we would be biting off more than we could chew. ...We do wander over and talk to the kids when the classes are here.

'Do you talk to classes?' I don't want to be seen as the one responsible.

School Four – Teacher Librarian

Matching the kid with the book. I would see that as the best promotional thing that you can do.

School Five – Teacher Librarian

The 2000 study initiated by the ACYL into the reading habits of Australian teenagers indicated the importance of the role of the teacher librarian in enabling this access to reading material. The study found: “The school librarian is the second most mentioned source of advice on good books to read” (ACYL, 2001, p. 28).

This means a substantial number of students rely on the school librarian for advice. The most mentioned source of advice was peers. If we consider that the library, as part of its reading environment, can offer ways and time for students to talk about books with their peers, this sees the influence over access held by the teacher librarian as even more crucial. The library itself as a source, and the teacher librarian as enabler, are an important part of the access equation for secondary school age students.

The knowledge base of the teacher librarian

“Readers are made by readers” (Chambers, 1991, p. 87).

An interested, knowledgeable teacher librarian who wants to communicate with her students can make a difference. Those observing notice, and this expertise is appreciated by all concerned as these remarks illustrate.

What Bernadette has been providing though, the boys are reading - because boys are asking her for books and she gets them in for them. She seems to know what the boys like.

School One - Library Assistant

She (the teacher librarian) knows more about the books than anyone else. I think the boys look up to her to give them advice.

School One – Library Assistant

Unfortunately only a few of the respondents actually took the time to maintain their knowledge to enable them to work effectively with students. Those who neglected this role also did not see reading promotion as their role and failed to appreciate their students as readers.

Teacher librarians who have a positive attitude towards their role in reading promotion often follow through with efforts to maintain a knowledge base that will allow them to work at recommending reading material to young people. Such a knowledge is not something acquired over night. It requires constant reading, professional development and continuing efforts to remain aware of current literature and reviews. Chambers, in his discussion of the enabling adult, says:

In the end they (learners) depend on knowledgeable grownups because there are some things about every craft and every art – reading is both art and craft – that you only know from experience and can only be passed on by those who’ve learned them by experience. (1991, p. 15)

Policy

Um, you need vision, goals, long term action plan, to understand responsibilities. In order to make any program work. We have a problem here in thinking - throwing money is enough.

School Three - Teacher

The teacher librarian establishes many of the policies that effect access directly. When will the library open? For how long? What will the teacher librarian provide? Will materials be easy to find? The decisions made that govern the answers to these questions are sometimes school wide decisions but often, on a purely practical level, they are the domain of the teacher librarian.

Policy, then, in a very fundamental way, governs access. To some extent the policy decisions made by the teacher librarian that govern access give the outsider an insight as to the views of a particular teacher librarian. The importance they placed on reading promotion, the collection made available, when and how the students are allowed access enable us to see their attitudes played out through their policies.

Collection management

“First and foremost teachers who want students to be responsive readers provide access to books”
(Hickman, 1995, p. 4).

They've got a really wide range, except most of them are a bit old, so updating them more, yeh, books mainly about just people, books that interest people, which is every kind I suppose.

School Three - Student

.. in the past there has been a little bit of tension between myself and the teacher-librarian about what sort of texts should go on the shelves.

School Five - Teacher

Many factors contribute to how a library is organised. The organisation of the library's collections is a primary role for any library. Decisions made by the teacher librarian directly affect the size, scope and forms to be found in library collections. The collection of books and other reading materials is one of the basic, essential factors in the creation of a reading environment. Carter (1987, p.18) has said: “Adolescents, like the rest of us, read what is available.”

How the collection is maintained, expanded and weeded has a primary effect on what is provided. The area of collection management is a vital component of access.

The Australian School Library Association, in its School Library Bill of Rights, states that it is: “the responsibility of the school library: To provide materials that will enrich and support the curriculum, taking into consideration the varied interests, abilities and maturity levels of the pupils served” (2002).

Library Reading Programs

“Books + teachers/teacher librarian intervention = reading achievement” (Haycock, 2001)

Buckingham (2002, p. 13), writing about research in two secondary schools in Great Britain found that special events such as author visits, festivals and clubs, were ‘a powerful tool’ in encouraging reading.

In most schools a wider reading program is a joint Library / English faculty initiative. In most cases junior classes come to the library on a regular basis. During this time they have access to collections and may be spoken to by library or English staff about new or suitable reading materials. The structure and nature of the wider reading program varies from school to school but most crucial is the time to browse, read and hear and talk about books and reading for pleasure. The research data showed teacher librarians and English teachers often at odds over who was to take responsibility for such classes. The extent of the teacher librarians involvement related most strongly to their attitude toward their role in reading promotion and the strength of their relationships with English staff.

Reading classes are seen as the domain of the English teacher working with a whole class for reading is not really seen as part of their role. There are introductory lectures about the use of technology but that's it. Guidance should come from the teachers, as teachers themselves are supposed to be the readers.

School Two - Teacher

There is no structure, not all of the teachers use that (timetabled English period) some of them come and use it for other things. I'm free as a staff member to go over and help them and recommend books, it isn't part of my job though as there is no time allocation so I don't always do it. There is no time to develop a plan or strategy...

School Two - Library Technician

Classes come regularly but we don't do anything.

School Three – Teacher Librarian

A structured reading program may provide the only 'browsing' time a student may experience. That is, time to just look at books. For secondary school students who do not come to the library out of class time, have no books at home, or access to a public library, browsing through the collection in their school library may be their only exposure to reading material. Time to browse is seen as essential by Chambers [1991, p. 35]

As with browsing, a structured reading program may also be an avenue for one of the other areas or prime importance to Chambers (1993), that is book talk. Whilst not every wider reading program does facilitate talk about books the scope is there for them to do so. To Chambers this is a crucial component of the reading circle – providing opportunities for students to 'gossip' about books, to talk amongst themselves and with enabling adults to further encourage their reading habit. As Chambers (1991) describes it, 'Reading is a social activity.' We need to share 'book gossip' (p. 83). Book talk 'deepens us as readers' (p. 84).

Whilst a wider reading program centred on the library and its collections can be an integral part of an effective reading environment it is not essential. Recent research has argued that perhaps it is the very nature of structured wider reading programs that is counter productive. The ACYL initiated research (ACYL, 2001) found that what young people wanted was more unstructured time: "Free reading time in secondary schools needs to be brought closer to resembling free reading time in primary school, by making it an experience that students enjoy and share" (ACYL, 2001, p. 9). More free interaction, talk and exposure to materials they like were preferred by students. All these are areas in which the library could very well play a constructive role as part of an effective reading environment.

Ambience

"Reading is not a duty, and has consequently no business to be made disagreeable (Augustine Birrell. *The Office of Literature*, 1887).

Todd Strasser [1988, p. 59], an author who has travelled to many libraries as a visiting speaker, lists the most important items that lend a good ambience to a library as - comfortable couches, round tables, visual imagery, paperback books and background music. This ambience, as Strasser terms it, or atmosphere, describes the feeling of the library space. Not created by just one component, it is the result of conscious thought being put into how best to use the architecture, how to utilise furniture, lighting, colour, display materials, signage and various forms of decoration, as well as the manner of the library staff. All combine to create a physical space that is home to the reading environment that the teacher librarian is trying to create. Fein recognises the need for the library to be a 'liked' place; "Now notice, I did not say reading, I said library. If kids don't like the library, they don't come in willingly. If they don't come in willingly, by association, they are less likely to want to read" (1996, p. 22)

The research respondents freely recognised the importance of ambience and were very aware of the various factors creating change.

It's not really that kind of library, but the computers have seemed to take over, it used to be a reading place.

School Three - Student

'Provide the ambience and they will do it' I don't think it would work here. I think. I haven't tried.

School Three – Teacher Librarian

Sometimes I think a lot of librarians, it's the old fashioned thing, you know like Sir Humphrey the best libraries don't have any students in them.

School Six - Teacher

....it's got to be an environment that's exciting, interesting and challenging...So if she can break down the barriers, which she has done, I think it then opens up so many more avenues for the students.

School One – Vice Principal

Doll, who discusses the library as a 'human environment' stresses flexibility and the need for the library to be 'a comfortable, welcoming place for students', a place they feel they have some ownership of (1992, p. 225; p. 227). This feeling of ownership, or belonging, is an important part of the ambience of a library. To make the physical space their own, students need to feel comfortable and that they may use the library, within guidelines, as they wish.

Layout

"There is then some evidence to indicate that children also seek to define and defend a territory for themselves" (Doll, 1992, p. 226).

Space and the use of that space is always an issue, and an integral part of what is a welcoming reading environment.

There aren't any areas for casual reading and that is what I don't like, but we are required by the behaviour of the students to have the tables set up that way (evenly spaced rows), that is the only way. We have got to have places where some boys can be separated.

School One – Teacher Librarian

They have the reading area but that is too small, cramped, noisy.

School Two - Teacher

We don't have that nice little lounge room bit – we can't put it in and the bit we have is disappearing as we put more computers.

School Three – Teacher Librarian

Studies undertaken on the aesthetics of a library environment - what furniture, where and how it is placed, how the library's 'face' is presented to its public - reveal what facets of library layout must be considered when spaces are defined and created. The brightness of the library space, the decorative additions to the walls, and the need for comfortable, accessible seating are all areas of concern to student populations.

Chambers talks of the 'value' given to an activity by giving it a designated space (1991, p. 30). Many libraries do just this with reading areas or story pits. In libraries where other collections have impacted on wider reading spaces, to the extent that reading areas have been swallowed up, the lack of value placed on these spaces is clear.

Doll reports that librarians should be aware of a number of factors concerning the need for private space (1992, p. 226). Colour, carpeting, seating and the use of space can affect the way a library is used and perceived. Doll also argues that spaces can affect behaviour and that how a space is to be used should be taken into consideration during the design process.

Unfortunately, much of how libraries use layout, furniture, lighting and colour is perhaps reactive, that is, spaces evolve in line with the needs of the school community and the views and attitudes of the teacher librarian. Very little forward planning takes place – items are moved and changed as needs arise. This can result in a confused arrangement and areas that are not particularly conducive to the functions that they are meant for. An overall plan for what the library is to be, and how it should be used, is rarely thought through carefully. Despite this there is agreement over the need for welcoming spaces that function effectively.

Display

Another way to create a stimulating library environment is to use display. Whilst it is recognised in the research as of importance it often appears to be the first things left when time constraints bite.

I was told by previous staff that doing display was wasting my time.

School One – Teacher Librarian

Its good to see your stuff on display.

School Three - Student

We are limited by time and uh, I suppose it comes fairly low on my priorities. I know that it would be good but some things you are not good at and where time is short you put the time where you think you will get more of a result.

School Three – Teacher Librarian

Often displays initiated by student or classroom teacher can not only brighten the space but assist in a sense of ownership of the library by those whose work or ideas are featured. Chambers devotes a chapter to displays in his book *The Reading Environment*. For him display “deeply influence(s) the mental set of people who see them” (1991, p. 23). He goes on to argue that with good book stock he sees good display, or the lack thereof, as an indicator of the value placed on reading and books within a particular school (p. 28).

The creative, imaginative nature of display, its ability to draw people in and create ever changing spaces make it a valuable component of any reading environment.

External Factors

“Schools are bureaucracies – and no one in a bureaucracy can be successful alone” (Hartzell, 1999).

All of the decisions and attitudes of the teacher librarian may be subject to the impact of external factors. All of these factors may often be decided by administrators, or teachers, outside of the library, with no input from the teacher librarian. The extent to which teacher librarians play a part in this decision making process varies, and is often reliant on how much influence they hold, and on how proactive they are in establishing a forum for their own views. The identified external factors are:

- budget
- staffing
- support from School Administration
- curriculum needs and demands
- architectural limitations

Due to space limitations these will not be discussed in this paper.

Professional Debate

There is no properly functioning individual whose mode of existence is not moderated or mediated (if not determined) by the social (Misson, 2000, p. 5).

The problem with library roles, as I see it. is that we are not really dropping any roles we are just adding to it.

School Two – Teacher Librarian

Well, um, I think we are torn between the two areas of information literacy and literacy or literature and its difficult to do as much as you would like in both areas at the same time.

School Four – Teacher Librarian

We are all affected by the various environments that operate around us. There is no doubt that the developments, changes and ideas that have permeated school libraries, and given direction to how they have developed, have often been filtered through debate and discussion within the wider educational community and the profession of teacher librarianship.

Welch and Braybrook, reporting on their Victorian wide study on the state of school libraries during 2001, suggest a “paradigm shift (in the profession of teacher librarianship) from collection focused practice to outcomes focus and a concentration on information literacy practice” (2002, p. 7). The paradigm shift or change in pattern marks a profession in a state of flux.

Recent articles in Access, the journal of the Australian School Library Association titled: 'Teacher librarians: What are we? What should we be?' and 'A profession or a specialization?' suggest that the profession suffers through lack of identity. Once the quandary was - Teacher, Librarian, or somehow both? In relation to this research the debate appears to be - What type of teacher librarian do we want to be? Information/Research specialists or wider reading/ Literature specialists? Are we to be both? Can we be both? Or are we moving into an age of specialization?

The move within libraries to take up new technologies to assist students in their studies is an important and valuable task that should be undertaken by the library and its staff. Unfortunately, it has become an either/or situation in many school environments. That is, rather than retaining roles in reading promotion and incorporating new approaches into library programs many institutions have found they do not have the time, the staff, or perhaps the interest, to do both. Often areas such as reading promotion have fallen by the wayside as new mantles have been taken up.

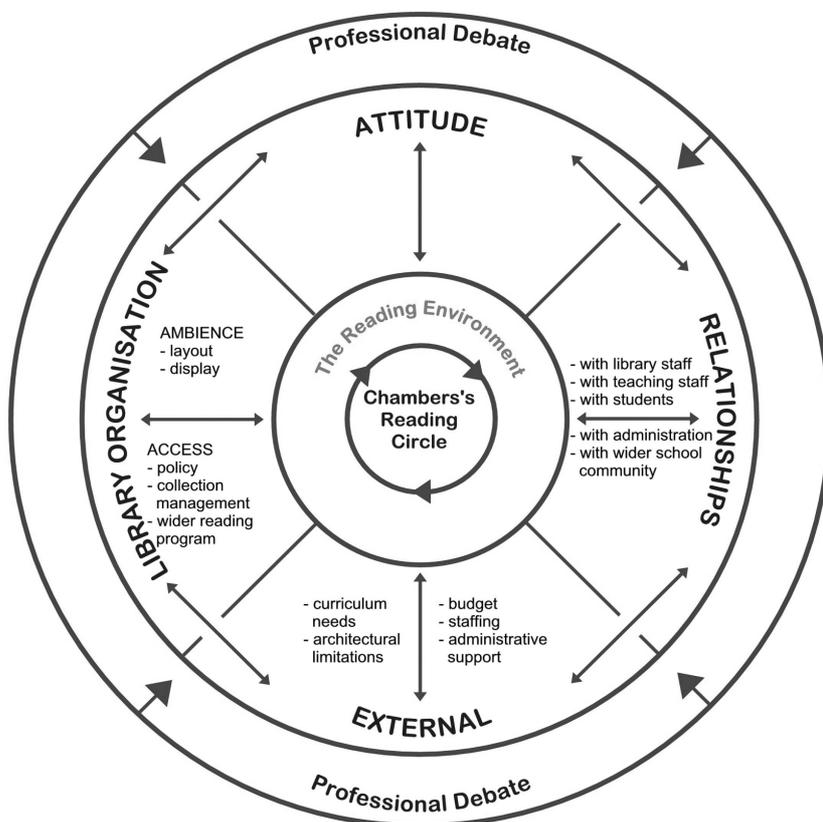
Young (2002) argues that reading for pleasure now takes in all formats and if we, and our students, are going to read for pleasure in the future we need to recognise this. Perhaps, some of what we struggle with is a redefinition of terms and roles as we integrate new and constantly changing technologies into our already crowded libraries.

The varied attitudes presented throughout this paper are all part of what is at present a very fluid professional debate. A debate that has crucial ramifications for the role and profession of teacher librarians, now and into the future.

The Reading Circle And The Reading Environment

The following diagram attempts to diagrammatically illustrate how all of the above mentioned factors impact upon, and interact with, the reading environment. In this reassessment of Chambers' ideas, his reading circle is placed within the context of a wider reading environment. This reading environment is constructed by, and impacted upon, by all of the factors identified. This diagram is an attempt to illustrate and better understand this interaction.

Diagram 1: Framework for Analysis



References

- A.C.Y.L. (2001). *Young readers reading: from keen to reluctant readers*. Melbourne, Australia: Australian Centre for Youth Literature and the Market Development Division of the Australia Council. Retrieved from <http://www.statelibrary.vic.gov.au/acyl/>
- Altmann, A. E. (1994). 'Literacy for the school librarian'. Paper presented at the Annual conference of the International Association of School Librarianship (IASL) titled *Literacy: Traditional, Cultural, Technological*, July 17 – 22nd 1994. Pittsburgh, USA.
- ASLA (2002) Policy statement - school library bill of rights, [web site]. Australian School Library Association. Retrieved June 4, 2002 from http://www.asla.org.au/p_bor.htm
- Atkinson, J. L. (1997). How she connects. *School Library Journal*, September, 43 (9), 110 - 114.
- Baker, D. P. (1980). Work together, not apart, to promote reading. *Instructor*, 54, March, 163.
- Buckingham, R. (2002). Highlighting the importance of reading and literacy in secondary school LRC's: a case study. *The School Librarian*, 50 (1), 10 - 13.
- Carter, B. (1987). What are young adults reading? *Educational Horizons*, Summer, 185 - 187.
- Chambers, A. (1991). *The reading environment*. Newtown, NSW: PETA, Thimble Press.
- Chambers, A. (1993). *Tell me: children, reading and talk*. Newtown, NSW: PETA, Thimble Press.
- DeGross, L. (1997). Perceptions of roles and relationships in the school library: A national survey of teachers, administrators, and library media specialists. Universities of Georgia and Maryland, USA. National Reading Research Centre, Reading Research report 72. Winter.
- Doll, C. A. (1992). School library media centers: the human environment. *School library media quarterly*, 20, Summer, 225 - 230.
- Fein, L. A. (1996). Enticing the pre YA's: too old for Cleary and too young for King. *Catholic library world*, 66 (4), 22.
- Hartzell, G. D. (1999). The principal - teacher librarian relationship as a key to influence and success. ISIS conference. (online) Wagga Wagga, NSW. Retrieved January 2000 from <http://www.csu.edu.au/research/cstl/isis/participants/papers/A-Hartzell>
- Hartzell, G. N. (1997). The invisible school librarian: why other educators are blind to your value, *SLJ online*. Retrieved January 2000 from <http://slj.reviewsnews.com/iindex.asp?layout=articlePrint&articleID=CA15297>
- Haycock, K. (1989). Research in teacher librarianship: the implications for professional practice. *Emergency librarian*, 17 (1) September/October, 9.
- Haycock, K. (2001). Books + Teachers/TL intervention = reading achievement. *School librarian*, 28 (4).
- Hickman. (1995). 'Not by chance: Creating classrooms that invite responses to literature'. In Nancy L. Roser & Miriam C. Martinez (Eds.), *Book talk and beyond: children and teachers respond to literature*. (pp. 3-9) Newark, Del: International Reading Association.
- Holland, E. L. (1994). The superintendent's role in developing a community of readers in Indian Middle-Grades schools. (Unpublished PhD Thesis).

- Krashen, S. (2002, 6th June 2002). Whole language and the great plummet of 1987-92: an urban legend from California, (online journal article). *Kappan Professional Journal - Phi Delta Kappa International*. Retrieved September 10, 2002 from <http://www.pdkniti.org/kappan/k0206kra.htm>
- Leonhardt, M. (1998). Make Lemonade: How to sweeten your school's climate for reading, (online journal). *SLJ online*. Retrieved February 2, 1999 from [http://www.bookwire.com.SLJ/articles.article\\$26663](http://www.bookwire.com.SLJ/articles.article$26663)
- Misson, R. (1997). Moving on or selling out? *EQ Australia*, Summer, 5-7.
- Moloney, J. (2000). *Boys and books: building a culture of reading around our boys*. Sydney, NSW: ABC Books.
- Novljan, S. (1993). The impact of the library on reading and the impact of reading on the library: the Slovenian experience. *International journal of information and library research*, 5(2), 91 - 107.
- Oberg, D. (1996). Principal support: what does it mean to teacher librarians. Paper presented at the International Association of School Librarianship (IASL) conference of 1995 titled *Sustaining the vision*, Worcester, England.
- Phillips, J. (1988). Automated or dedicated: the image of the school librarian. *ACCESS*, 2(3), 24 - 25.
- Smart, P. (1985). *The secondary school library: dukedom large enough?* Wellington, NZ: Council for Educational Research.
- Smith, D. K. D. (2002). Building student learning through school libraries. Paper presented at the White House Conference on School Libraries, 4th June, 2002. USA: Institute of Museum and Library Services. Retrieved June 21, 2002 from <http://www.ims.gov/pubs/whitehouse0602/kathleensmith.htm>
- Strasser, T. (1988). Lending ambience to libraries. *School Library Journal*. 34 June/July, 59.
- Todd, R. J. (2000). Teacher Librarians at the millennium crossroads: gloom, doom or boom? *Teacher & Librarian*, December, 105 - 108.
- Welch, B. & Braybrook, P. (2002). Paradigm shifts and the teacher librarian. *FYI*, 6 (2), 4 - 7.
- Worthy, J. (1996). Removing barriers to voluntary reading for reluctant readers: the role of classroom libraries. *Language Arts*, 73, 483 - 492.
- Young, T. E. (2002). The game of reading: not just books anymore!, [online journal]. AASL - *Knowledge Quest Web*. Retrieved September 10, 2002 from http://www.ala.org/aasl/kqweb/30_3_network
- Zahnleiter, J. (1985). A classroom climate for literary response. *Australian Journal of Reading*, 8 (4), 187 - 195.

Biographical Note

Susan La Marca is a PhD student at the University of Melbourne, Australia. This paper is based on her research. Susan is also the Publications Officer for the School Library Association of Victoria and the associate editor of *Viewpoint: on books for young adults*. She is the editor of *Back to books: creating a focus on fiction* (1999), *Books up front: investing in the value of reading* (2001) and *Effective learning spaces: inspiration for school library design* (2003). Email: slm@slav.schools.net.au

Rendering A Comprehensive School And Community Library Service To Remote Rural Communities In South Africa By Forging Partnerships

Sophia le Roux

Sophos Information Services

South Africa

and

Francois Hendrikz

Mpumalanga Provincial Library & Information Service

South Africa

Substantial backlogs in public and school library services in South Africa, especially in the previously disadvantaged, remote rural areas, compel library authorities to explore alternative, more cost-effective ways of library service delivery. This paper describes a South African study which investigated the variants of the school-community library model worldwide, with the aim of defining a South African prototype, which would satisfy the needs of a rural, tribal community. The paper also discusses how this prototype is currently being piloted in a rural, tribal area in the Mpumalanga province by forging partnerships with various stakeholders.

Introduction

There are substantial backlogs in public and school library services in South Africa, especially in the previously disadvantaged, remote rural areas. The only feasible solution to achieving improved provision of public and school library services appears to be through shared or joint-use services. This paper consists of two parts. It describes a study which investigated the variants of the school-community library model worldwide with the aim of defining a South African prototype, which would satisfy the needs of a rural, tribal community (Le Roux, 2001). The second part of the paper describes how the prototype proposed in this study is currently piloted in a remote rural area in Mpumalanga by forging partnerships with various stakeholders.

In the context of this paper a school-community library refers to an integrated school and public library service, operating from a single building, which operates according to an agreement between the school and another tax-supported agency or agencies, e.g. the provincial or local government authority. It aims to serve learners, educators and the community (general public) within the particular municipal boundary, by means of the facility (Le Roux, 2001, p. 19). Remote rural communities are tribal communities living in dense, planned settlements, with populations of over 5,000 people, which are common in the former homeland areas. These settlements are referred to as “*betterment*” settlements in local government planning in South Africa (South Africa. Ministry for Provincial Affairs and Constitutional Development, 1998, p. 13).

Scope Of The South African Study

Although several variants of the school-community library model which could be considered for South Africa do exist in other countries, there is a need for developing different prototypes of this model geared to the information needs of the diverse communities in South Africa. As the people living in the remote rural areas in South Africa are particularly disadvantaged as far as access to information to improve their lives is concerned (Le Roux, 2001, p. 254),

the study investigated a possible variant of the school-community model which would suit the communities living in these areas. The study therefore examined the variants of the school-community library in their particular geographical, social and educational contexts in the USA, Canada, the United Kingdom, Scandinavia and Australia (South Australia), to determine whether comparable conditions existed which would justify the implementation of this model in the rural, tribal areas of South Africa. The study examined the reasons for the historical development of the school-community library model in the selected countries, as well as the practical application of this model through a critical review of the literature, an analysis of published case studies, and a study of official documentation.

Prerequisites for the successful implementation and operation of the school-community library, as identified in the study of the selected countries, provided a framework for evaluating the possible application of the school-community library model to the rural, tribal communities in South Africa. The suitability of the different variants of the school-community library model for these communities was then considered. After examining all these factors the school-community library model, housed in a public library building, was proposed in the study. The characteristics and the perceived advantages of this variant of the model were indicated as well as the conditions needed for the successful implementation of this variant of the model. Finally, a set of guidelines was presented for the establishment and operation of this library model in a South African rural community in the tribal areas (Le Roux, 2001, p. 275-291, 343-366), which can be used for piloting this model by provincial and local authorities in South Africa and also by government authorities in other African countries with comparable conditions.

Relevance Of Overseas Experience To South African Rural Areas

The factors found crucial to the successful establishment of the combined school-community library in the selected countries were determined and examined in the South African context. These factors are set out below.

Political commitment by the government to the idea of school and public library co-operation

After a review of the relevant legislation governing the rendering of school and public libraries, it became clear that nothing in South African legislation prohibits government bodies from initiating plans and actions involving co-operation between school libraries or between school and community libraries. Chapter Three of the new South African Constitution requires all spheres of government, as well as government departments, to conduct their activities in a co-operative way (South Africa, 1996, p. 21). It appeared that South African legislation actually provides an enabling framework for co-operative ventures between various partners (Le Roux, 2001, p. 216).

Commitment of funding authorities

A commitment by all the co-operating partners to the funding of the combined school-community library has proved to be crucial. This presents a problem in the South African context, as the funding of school libraries and community libraries, under the new constitutional dispensation, currently presents serious problems for provincial as well as for local authorities. The restructuring of local government, after the local elections in 2000, poses serious financial implications for community libraries. The establishment of new library models, although cost-effective in the long term, will initially create additional expenses (Le Roux, 2001, p. 228).

Provision of adequate, suitable and compatible staff

In South Africa this prerequisite could also create problems. In many schools, teacher-librarians have been retrenched or re-allocated to other duties (Lor, 1998, p. 7). The government's commitment to reduce personnel spending could impact negatively on the staffing of the combined library model, on the range of services offered, and on the opening hours of the facility. In addition, the *South African School Library Survey 1999* (South Africa. Department of Education & Human Sciences Research Council, [2000], p. 26-27) has found that, with the exception of Gauteng, in all the other provinces fewer than 20% are in possession of the appropriate qualification (Le Roux, 2001, p. 231).

Request from local community and ongoing community support

Several factors militate against the potential use of public libraries in rural areas. The adult population in the rural, tribal areas is mainly illiterate or semi-literate, and there is the absence of a reading culture (Raseroka, 1997, p. 2), as well as the dominance of an oral tradition (Fairer-Wessels & Machet, 1993, p. 101). It is, therefore, important that, wherever, a combined library service is considered, the community must have indicated that there is a need for such a service, and that it will indeed be used (Bristow, 1992, p. 79).

Central support mechanisms

Central support, such as a cataloguing, classification and processing service; mechanisms for collection development and inter-library loans; a professional development component; and an advice service, was found to be of the utmost importance (Little 1996, p. 36). Following the recent restructuring of LIS in South Africa, the majority of the new provincial Library and Information Services as well as the provincial Education Library and Information Services (ELIS) do not, as yet, have the necessary resources and staff to provide central support to community libraries and school libraries (Le Roux, 2001, p. 232).

Involvement of all parties in planning for a library model

All the groups likely to be affected by, or involved in, the implementation of the library, have to be represented on the planning body. In the South African context, the leadership in the particular community has to be identified and care has to be taken that all community structures are represented in the planning body, so that the library will grow out of the needs of the community and not be imposed from outside (Fairer-Wessels & Machet, 1993, p. 107).

Careful planning of the combined library

A planning committee should be elected by the representatives of the community during the initial planning stages. Areas that need to be given special consideration by the planning committee are: the physical facility, its location, size and design, the staff, the decision-making authority, financing, collection development, administration, and marketing the proposed combined services (Le Roux, 2001, p. 235).

A service based on the needs of the community

When planning a combined library for a South African rural, tribal community, it will be necessary to take cognisance of development theories and development research. A "basic needs" approach is called for which will make the combined library relevant to the life and work of the people in the community and will contribute to improving the quality of their life (Stander, 1993, p. 6). Only then the community will accept it as their major source of information (Ngulube, 2000, p. 2).

Locally representative, enthusiastic, and skilled Library Board of Management

The appointment of a locally representative, enthusiastic and skilled Library Board of Management has been found to be of critical importance to the success of the combined library. This body should represent all parties involved, in accordance with the specifications of the joint-use agreement. In the rural, tribal communities, this would call for much initial and ongoing capacity-building of the library's governing body members by the relevant provincial education department (PED) and provincial LIS.

Clear and flexible guidelines and procedures

Clear guidelines for the establishment and operation of the combined library model were felt to be essential in clarifying the needs, roles and responsibilities of all parties and in outlining the outcomes of the co-operative venture. (Le Roux, 2001, p. 241).

Proposed Public Library-Based School-Community Library Model

In terms of the crucial factors mentioned above, it was found that the successful implementation of the school-community library model, as found in the selected overseas countries, will not easily be accomplished in South Africa. This will especially be the case in the remote rural, disadvantaged areas of South Africa.

For example, it was apparent from the literature that combining school and community library services in the selected countries was only considered and implemented in cases where there was either a lack of school library services or of community library services, as well as an absence of qualified library personnel. This was mostly the case in small, remote rural communities. In almost all the cases, the combined school-community library was housed in the school. A precondition for this arrangement, was, however, a functional and well-resourced, school library making it the obvious place to establish a joint-use facility.

According to the findings of the *School Register of Needs Survey*, conducted during 1996 (South Africa. Department of Education, 1997, p. 8, Fig. 16), primary school libraries in the rural provinces of South Africa are almost non-existent, with percentages as low as 2%. The percentage of secondary schools with school library facilities was also found to be very low in these provinces. This shortage of on-site school library facilities has been confirmed in the *South African School Library Survey 1999* (South Africa. Department of Education & Human Sciences Research Council, [2000], p. 11).

In addition, the *School Register of Needs Survey* showed that there was a national shortage of 57,499 classrooms in 1996 (South Africa. Department of Education, 1997, p. 9). The building of classrooms, rather than libraries is, therefore, a priority for the government. Moreover, specialised facilities, such as a library for a secondary school comprise almost 50% of the building cost of the school, while general teaching space usually represents less than 30% of the total cost. Maximum shared use should, therefore, be made of these expensive, specialised facilities and space by schools and the communities (Smit & Hennessy, 1995:45-46).

The use of existing school libraries for a combined school-community library therefore appeared not to be a viable proposition for the remote rural areas. The study instead proposes a variant of the school-community library model, one where the combined library is located in a public library facility and is surrounded by a cluster of schools. This is a group of schools in close proximity, grouped so that they may share some of the capital intensive facilities. It is obvious that the proposed model of the school-community library, where the library facilities are used by different schools and the community, could only be implemented in rural areas where there are already clusters of schools. The *Schools Register of Needs Survey*, has, however, indicated that clusters of schools in South Africa are located in either the metropolitan areas, or in the former homelands and self-governing states (South Africa. Department of Education, 1997, p. 9). As clusters of schools are thus found in these remote rural areas in South Africa, the establishment of a combined school-community library in an accessible, public library building, if available, would appear to be a more cost-effective and practical solution for serving the community and the cluster of schools in these areas.

Characteristics Of Proposed Library Model

Community traits and involvement

The target community for the public library-based school-community library is a community living in a rural area, which, in all likelihood, falls under the authority of a traditional leader. This community comprises a relatively small and homogeneous group of people sharing the same culture and language, who live and work together in close, interdependent proximity, and who share close personal relationships, common value systems, and a strong awareness of their distinct group identity.

The adult section of such a community is characterised by a high level of illiteracy, a dominant oral tradition, limited resources, and a need for information for mere survival. The community shows signs of direct involvement in school matters and social and cultural activities. Bristow (1992, p.79) refers to this type of community involvement and commitment as “a sense of communality”, considering it the greatest resource of rural disadvantaged areas. The acceptance of the idea of a combined library in the community implies a commitment by the community to maintain the operating services of the facility by means of funds and voluntary personnel.

Location, size and design of facility

The location of the combined facility has to be within a 750m radius of participating schools, i.e. the schools have to be within ten minutes' walking distance from the library. The facility can be either a new purpose-built library or an existing structure found to be suitable by the provincial LIS for housing a combined library facility (Hendrikz, 2000, p.8).

The nature of the accommodation and of the facilities will be determined by the aims, goals and objectives of the information service. It is imperative for the facility to have one or two separate activity rooms with outside doors for teaching information literacy to the learners of the participating schools during the day, and for adult community activities during the evenings.

Staffing

The library has to be staffed by a qualified public librarian with, at least, paraprofessional qualifications. The librarian has to be active in interpreting the information needs of the users, who may not be functionally literate, and in providing relevant material. The librarian has to have credibility and standing within the community and has to be a fully committed member of the community.

In addition, the part-time services of teacher-librarians or teachers from the participating schools need to be time-tabled to teach information literacy to each of the schools' classes and to create and sustain a positive reading climate in the schools. They also need, in co-operation with the librarian, to plan for the purchase of curriculum-oriented information resources. Voluntary library workers need to assist with the performing of routine library tasks, and the delivery of the various services and outreach programmes to the community. The voluntary library workers should assist the librarian with marketing the library and its services to the community and thus will play a pro-active role in ensuring its use by the community. Retrenched or retired teachers could be used for conducting literacy and Adult Basic Education and Training (ABET) classes (Le Roux, 2001, p. 261-262).

Library stock

The information resources should include all available media to meet the needs of non- and newly-literate users and cover topics of relevance to the community. This information has to be in a simple and accessible written style, and has to be available in the indigenous language of the community. Special attention has to be given to the reading needs of the school learners in the community, in order to create the habit of using libraries for information, education, and for recreation.

Services and outreach programmes

The level of services of the combined library has to be determined by the community itself. It needs to be a people-oriented, information service, combining the oral tradition and the print medium, so that everybody in the community can be reached. An interactive community information service should be provided according to the needs of the community, forming an integral part of the community development process.

One of the pivotal services rendered by the combined library should take the form of block loans, circulated regularly to the classrooms of the participating schools, as a resource for both educators and learners. The presence of books in the classroom would ensure that books and book-related learning are integrated into the learners' classroom experience from an early age, promoting an awareness and appreciation of the importance of books and libraries.

The combined library should form part of the existing provincial LIS with all its advantages. The combined library would also forge links with other community-based and non-governmental organisations to enhance its services to its users. These would include literacy organisations, educational organisations and initiatives such as telecentres and Multi-purpose Community Centres (MPCCs) (Le Roux, 2001, p. 263-366).

Conditions Needed For The Successful Implementation Of The Model

Government funding and support

The public library-based school-community library model presupposes the involvement and financial commitment of the local community. However, the financial backing and other support of the provincial and local government are crucially important to the success of the model.

Location and size of facility

The facility should be located within a minimum walking distance of the school: about one kilometre from primary schools and two kilometres from secondary schools. A cluster can consist of five to twelve schools (Smit & Hennessy, 1995, p.2). The size of the facility may vary significantly from community to community, according to different community dynamics and circumstances.

Pre-service and in-service training

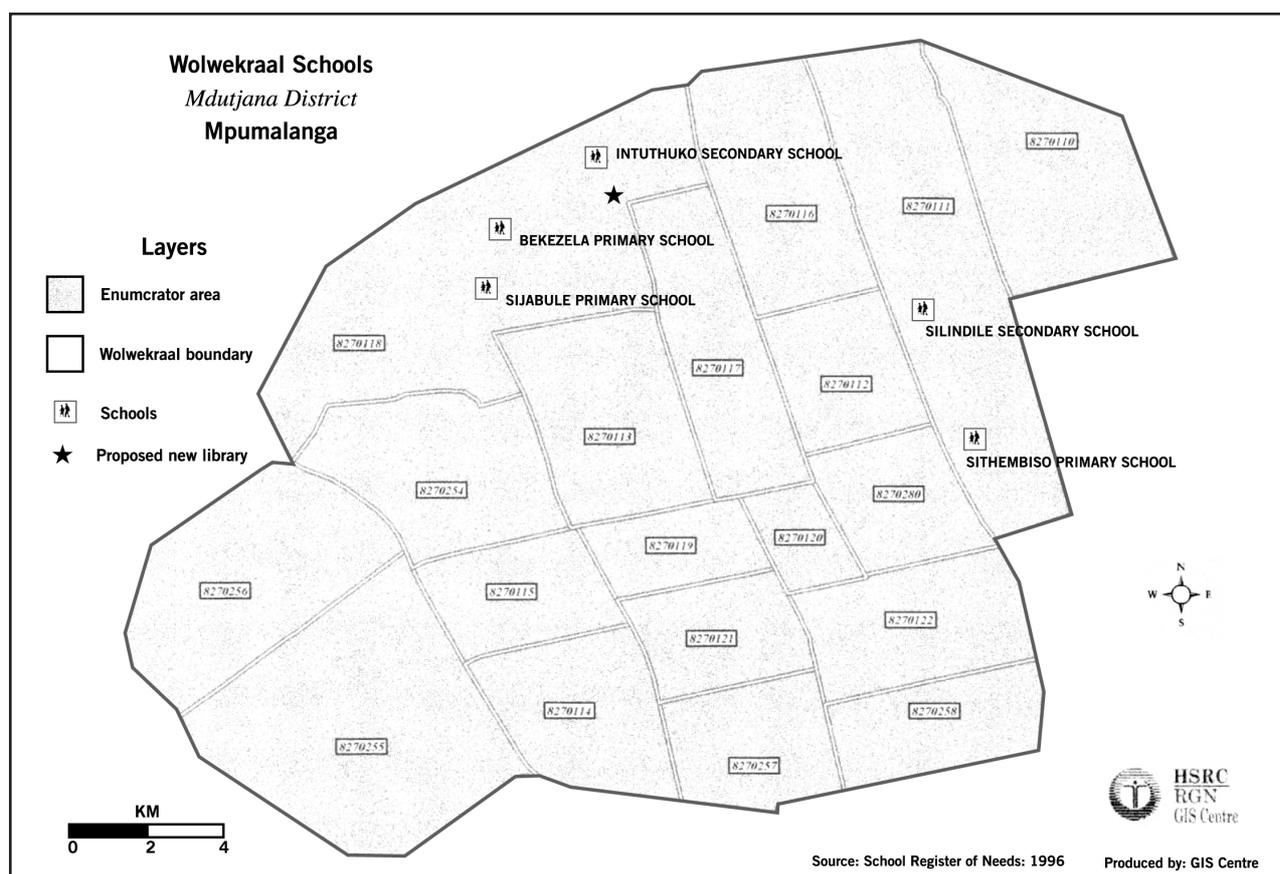
Librarians working in rural, tribal communities should be trained to fulfil “shifting” roles when serving both schools and information deprived communities (Tötemeyer as quoted in Radebe, 1996, p. 69). Workshops for principals and educators on the role of the school library, its value in the new outcomes-based education (OBE) curriculum, and its central position in learning are essential. The failure of principals to recognise the importance of these factors has been identified as being a major hindrance to the promotion of school libraries (Radebe, 1997, p. 225). The provincial education departments (PEDs) need to provide educator development programmes on the utilisation of educational technology and the Internet as a tool to enhance teaching and learning (Le Roux, 2001, p. 269-271).

Access to and utilisation of Information Communication Technology (ICT)

The various ICT initiatives in South Africa have great potential to enhance the public library-based school-community library model in the rural, tribal areas and add a new dimension to this library model. By utilising the ICT infrastructure available in South Africa, the combined library has the potential to enable members of remote rural communities “to exploit information to enhance their well-being” (Economic Commission for Africa, 1999, p.19).

My colleague, Francois Hendrikz, will now show a map of a rural, tribal area in Mpumalanga (in the former KwaNdebele) (Figure 1), where the provincial LIS has recently built a public library facility. The location of this community library and the characteristics of the community appear to be most suitable for developing this variant of the combined school-community library. He will also tell you more about the Mpumalanga Provincial Library Service, the Maphotla community and the planning process in piloting this particular school-community library model in this community in partnership with other stakeholders.

Figure 1:



Background Of Mpumalanga

Mpumalanga is one of the nine provinces of South Africa. Prior to the first democratic elections of 1994, South Africa consisted of four provinces. Following the election, five new provinces were established, of which Mpumalanga was one. It is mainly a rural province. Mpumalanga inherited a public library infrastructure that was fairly well developed in and around the towns of the province but the same cannot be said of the rural areas. Two former homelands were also incorporated into the province. Library services and infrastructure in these areas were non-existent.

Public libraries and school libraries in Mpumalanga are currently the responsibility of two separate government departments, i.e. the Department of Sport, Recreation, Arts and Culture and the Department of Education. The lack of public library infrastructure and services in Mpumalanga is one of the biggest challenges facing library authorities. The same scenario is true for school libraries. The lack of various resources has made it difficult for library authorities to establish any appropriate library infrastructure and services. Most schools are without any school libraries and teacher-librarians have been laid off or re-deployed. The public library authorities have just recently determined that there is a need for 98 public libraries in the rural areas. It is almost certain that such a backlog will never be addressed solely by building new libraries. This assumption is based on the fact that it took almost four years to secure funding to build two new public libraries during the 2002/2003 financial year. The lack of an appropriate budget is the single most important factor influencing the establishment of proper library facilities and services. This is also true for school libraries where the focus is on the building of classrooms. Catering for the needs of learners is the priority of the education authorities. It is therefore clear that it is in the interest of both library authorities to share resources in order to bring library services to the whole community.

The school-community library model provides an ideal opportunity for both library authorities to explore the possibilities of such an endeavour. If the need for both public library services and school library services can be addressed through the innovative use of one facility, both parties could save valuable resources. These savings may in turn be utilised to improve the quality of the library services.

The Maphotla Community

There are various reasons for the decision of the Provincial Library Service to select the Maphotla community area to build a new library building. Firstly, there has been much community enthusiasm for, and involvement in, establishing a library in their community. Secondly, there are well established community-based organisations, and committed and active community leaders all supporting the library. I will shortly come back to this point when discussing some implementation strategies.

It is important to understand the demographic profile of the community, as this will give an indication of why it was decided to build a library in that community. The only official figures available for the Maphotla community are those of the 1996 census. The figures of the most recent census conducted during 2001 are not available yet. The total population of Maphotla is 8558 of which 3967 are male and 4591 female. The Maphotla population is very young. Almost half, i.e. 49% of the total population is made up of young people up to the age of 19. This already gives one an indication of the vast potential for libraries in terms of reading and educational needs. In the light of the youth of the population and the fact that 53% of the total population are women, it has been assumed that a large percentage are mothers. This therefore represents another huge potential market for the library in terms of childcare programmes, mother and child reading programmes, and book awareness programmes. People who are unemployed and those with no income in the community make up a substantial 49%. This implies that these people may be hoping to use the library to improve their knowledge, skills and qualifications in order to obtain a job or to become entrepreneurs contributing to the economy of Maphotla.

The most challenging figure to be considered when planning library services is the 73% of people who have little or no education. This figure indicates that illiteracy is rife, implying an almost non-existent reading culture. Coupled with the fact that this community has only recently obtained access to a library, it is safe to assume that there is only a limited library culture. The new library is something the community will have to become used to and strategies are needed to attract and explain the use, role and function of the library to all community members.

The use of library resources by the community will also have to be addressed carefully. The main language spoken by the majority of community members is isiNdebele.

These figures provide just a brief overview of the Maphotla community. These and other factors were taken into consideration during the planning phase of the school-community library service. It is also important to keep the dynamics of this community in mind when planning library services. Conditions are constantly changing and should be continuously evaluated in order to ensure that the library maintains a relevant role in the community in terms of the information and education needs of community members.

Project Plan

The success of any project depends on the amount of planning that goes into it. This undertaking is no different and a broad project plan was developed for it. The project plan is important to clarify what one wants to achieve and to focus one's efforts. It is equally important to use the project plan as a discussion document to attract the interest of various other role-players. One of those role-players was the provincial Education Library and Information Services (ELIS), who immediately supported the plan. Time does not permit a full discussion of the project plan and I will therefore only cover the main points of the plan.

The aim of the project is to establish a functional school-community library model as a benchmark to be replicated by other communities lacking sufficient and appropriate library facilities and services. Five objectives were identified:

- building a complete new library facility and furnishing it by April 2003
- making the community aware of the library and involve them where applicable
- signing agreements with relevant authorities for the management and maintenance of the library facility and its contents
- preparing the library to render a fully functional library service to the community at large
- developing and rendering comprehensive school and community library services and facilities in support of personal and/or community development initiatives.

Various broad strategies to achieve these objectives were also formulated and I would like to refer to a few that may be of interest to the audience.

Community Awareness Of Library Project

Making the community aware of the project to secure their support, acceptance and involvement is very important in giving the library a relevant role in the community. The Maphotla library is not new to that community and the community is therefore well aware of the library. What is different is the fact that a new library building, with new services based on the school-community library model is being planned. The community therefore had to be informed. This was done most effectively during a community information meeting held during January 2003. At this meeting the project proposal was introduced to the community. The important role and function of the library as well as reading was also re-emphasised by the various speakers on the program. Over 200 people of the Maphotla community attended the meeting, including various community leaders, the Mayor and councillors of the local municipality as well as the provincial Minister of the Department of Sport, Recreation, Arts and Culture. One of the success factors for such projects depends on the political support available. In this case the project is fortunately well supported by the provincial and local political leaders.

One of the more pertinent strategies in the approach to awareness deals with surveying the community. A community survey will be conducted to obtain the latest data about the community, its expectations and needs. This will serve as a guide in the development of appropriate and relevant library services. Another very important strategy will be the establishment of a representative library committee consisting of various stakeholders e.g. representatives from the local council, the Provincial Library and Information Service (PLIS), the Education Library and Information Services (ELIS), the Department of Education, schools, the school-governing bodies, local business and community members.

PLIS and ELIS should provide professional guidance to this committee. The purpose of this committee is not to manage the library but to guide and advise library management in matters such as:

- financing (amount of resources required annually, sharing of costs)
- collection development (identifying information sources needed; balancing print, visual and audio formats; language)
- administration (hours of opening; circulation procedures, policies)
- promote and market the library and its services
- utilisation of facilities by community groups
- consultation with government authorities and any other groups on issues relating to the library.

Service Level Agreements

The third objective of the project plan refers to the signing of agreements between relevant authorities for the management and maintenance of the library facility and its contents. There are various structures involved in making the project successful. Each role-player has a specific role and function, which needs to be clarified in an agreement and signed by all involved. Agreements have been signed between the municipality and the Provincial Library & Information Service of the Department of Sport Recreation, Arts and Culture (DSRAC PLIS). The agreement covers the basic management and maintenance of the library including:

- management
- funding
- staffing
- training
- marketing
- library resource ownership and accountability

Another agreement has been signed between DSRAC (PLIS) and ELIS who are the two main service providers to the library. The agreement covers aspects such as:

- collection management (selections; acquisitions; processing of material, cataloguing, ownership or resources)
- budget planning
- accommodation of shared resources
- minimum norms of shared services
- information technology management
- distribution of material to library and schools
- human resources (sharing and skills transfer)
- training programmes (user education; information accessing skills; literacy skills, reading programmes)
- marketing planning and events.

A third type of agreement is in place to be signed by the municipality on behalf of Maphotla Public Library, with any stakeholders interested in rendering/providing co-operative services through the library, i.e. community-based organisations, non-governmental organisations. Areas covered are:

- type of service to be rendered
- responsibility
- budget
- use of facilities (access, hours)
- minimum requirements of services.

It is important that these agreements be drafted and signed to administer and manage relationships and to ensure that each role-player understands its roles and responsibilities. This minimises misunderstanding and ensures that services are rendered as agreed.

The library will extensively pursue partnerships and relationships with external organisations. One example of such co-operation that was in place long before the new library became a reality is with a non-governmental organisation (NGO) called Biblionef. This is an international NGO with an office in South Africa. The main purpose of Biblionef is the distribution of new children's books to disadvantaged communities. These books are also provided in the language of

that particular community. Biblionef donated various non-fiction and reference books and has already indicated that it would be extending its services to include the provision of educational toys and a reference collection for educators, as well as support in reading programmes. This type of support is vital for the continued success of the library, which is very isolated and far removed from well-established service providers. Other external support will be sought, depending on the needs of the community and the library.

Preparing The School-Community Library Service

Starting a brand new library requires a great deal of preparation. Adding to the mix, the establishment of a school-community library model which has never been done before gave the planners even more responsibility. Some of the strategies implemented to prepare the library service include the following tasks:

- It was necessary to select and provide library material to the library in accordance with the diverse needs of the community at large.
- Since this library is serving two distinctive markets, i.e. the public at large and the school community, special attention has been given to the selection of material for learners and educators in support of the education function. The experts of the Department of Education performed this task as the material has to be in line with the national curriculum.
- Teacher-librarians of the participating schools need to be trained to utilise the learning support material and in teaching information literacy. This also includes the scheduling of classes to visit the library during school hours and the placement of book trolleys in classrooms to act as classroom libraries.
- Computer equipment had to be installed and training had to be provided. The Provincial Library Service was fortunate to secure a grant from the Carnegie Corporation of New York to computerise all public libraries in the province and to provide access to the Internet and the electronic catalogue of the province. This three-year project also includes the training of library workers to utilise the equipment including interlibrary loans. The Maphotla Library is also receiving the benefit of this project called Building Electronic Bridges.

Service Mix

Developing and rendering comprehensive school and community library services and facilities in support of personal and/or community development initiatives is what the library model is all about. Various “service mixes” are planned and provided for. Services in place for the typical public/community library part of the model cover the traditional services such as:

- lending of library material
- interlibrary loans
- study and reading facilities
- photocopying, faxing and the use of audio-visual equipment
- exhibitions
- reference service.

Services in place for the educational arm of the model cover

- visits by school classes to the public library
- rotation of block loans from the library to the classroom libraries
- visits by public library workers to class libraries in participating schools
- the co-ordination of planning of project work between the librarian and the educators of the schools
- the development of course material for workshops for principals, school governing bodies and educators of participating schools and the presentation of the workshops.

A third service mix is also planned and provided for, which includes various other initiatives that will benefit the community through the use of the library and its facilities. These services are usually rendered by outside organisations and include:

- ABET classes
- literacy classes
- information literacy classes
- workshops and video presentations on relevant and applicable topics e.g. personal hygiene by the Department of Health
- the provision of life-skill assistance e.g. writing letters, filling in forms, utilising of telecommunication facilities
- other community-specific services, e.g. local art or craft exhibitions and classes, career guidance
- book talks, story-telling sessions and reading programmes.

With regards to the last, the library is involved with the Centre of the Book, which is part of the National Library of South Africa, in a project called "First Words in Print". Book packs consisting of four books per pack have been distributed to 2500 children between the ages of one to five years. The books are written and illustrated by South Africans and are provided in the language spoken in the Maphotla community.

Conclusion

It should be clear from all these factors that the Maphotla library is not a quiet place and is surely destined to be a model library in every sense of the way. It is a happy story, and hopefully a story without an end. One could almost say it is a "rags to riches" story if one considers where the library comes from. I would therefore like to conclude this paper by showing some slides which will illustrate what is meant by "rags to riches".

References

- Bristow, A. P. (1992). The role of the rural school library in development, *Mousaion*, vol. 10(2), 71-82.
- Economic Commission for Africa. (1999). *African information society initiative (AISI): an action framework to build Africa's information and communication infrastructure*. Retrieved October 30, 2000, from <http://www.bellanet.org/partners/aisi/more/aisi.htm>
- Fairer-Wessels, F. & Machet, M. P. (1993). The development of alternative library and information services for the black community in South Africa, *Mousaion*, 11(1), 100-111.
- Hendrikz, F. (2000). Creating a knowledgeable society and future: White Paper of Mpumalanga Provincial Library & Information Service. Paper presented at the LIASA Conference, Durban. (Unpublished).
- Le Roux, S. (2001). School-community libraries: some guidelines for a possible model for South Africa. MLIS thesis. University of Pretoria.
- Little, V. (1996). School community libraries in rural South Australia. In J. Karlsson (Ed.). *School learners & libraries* (pp. 31-43). Dalbridge: Education Policy Unit, University of Natal.
- Lor, P. J. (1998). Memorandum on the state of libraries in South Africa, March 1998. *The LIASA letter*, 2(1), 7-12.
- Ngulube, P. (2000). The role of rural libraries in promoting the people's right to information. Paper presented at the LIASA Conference, Durban. (Unpublished).
- Radebe, T. (1996). *The school library movement in South Africa: recent policies and development*. In S.A.H. Abidi (Ed.) *School libraries in Uganda: papers & proceedings of a DSE/EASL/MOES Seminar, Kampal, 1995*. (pp.48-76). Bonn: German Foundation for International Development & Education, Science and Documentation Centre.

Radebe, T. (1997). Experience of teacher-librarians in the workplace after completion of the school librarianship programme. *South African journal of library and information science*, 65(4), 218-226.

Raseroka, H. K. (1997). Public libraries and life long learning - African perspectives. Paper presented at the 63rd IFLA General Conference, 1997, pp. 1-7. Retrieved September 17, 1998, from <http://www.ifla.org/ifla/IV/ifla63/63rash.htm>

Smit, W. & Hennessy, K. (1995). *Taking South African education out of the ghetto: an urban-planning perspective*. Cape Town: UCT Press & Buchu Books.

South Africa. (1996). Constitution of the Republic of South Africa. [Act No. 108, 1996]. *Government gazette*, 18 December 1996.

South Africa. Department of Education. (1997). *School register of needs survey*. Pretoria: The Department.
South Africa. Department of Education & Human Sciences Research Council. [2000]. *South African school library survey 1999: national report*. Pretoria: The Department. (Final draft).

South Africa. Ministry for Provincial Affairs and Constitutional Development. (1998). *The White Paper on local government*. Pretoria: The Ministry.

Stander, C. (1993). Appropriate school libraries in an African context. Paper delivered at the Info Africa Nova Conference, Pretoria, 1993. (Unpublished).

Biographical Notes

Sophia le Roux holds an M Bibl and a Higher Education Diploma. She has more than 20 years experience as a teacher-librarian, as a lecturer of School Librarianship and as Head of Media Centre Services, responsible for the provision of School Library Services. She regularly delivers papers at conferences and read a paper at the IASL Conference in Pittsburgh, Pennsylvania, USA. Since 1996 she is operating as an independent information consultant. Her clients include the Department of Education, the North West Department of Education, the South African Qualifications Authority (SAQA), UNESCO and the Institute for Democracy in South Africa (IDASA).

Francois Hendrikz obtained his masters degree in library and information science at the University of Pretoria. He started his professional career in 1985 and since then has worked in various government libraries. He is currently heading the provincial library & information service of Mpumalanga. During his career he participated in various library related task teams, e.g. information communication technology, library co-operation, etc. He has a keen interest in strategic planning and management initiatives as well as library marketing. He has read papers at international and national conferences, e.g. the International Association of Technological University Libraries and the Library & Information Association of South Africa. He has also published and co-authored articles in various international and national professional journals, i.e. Alexandria and the South African Journal of Library and Information Science.

Integrating a Community Library into the Teaching and Learning Programme of Local Schools: Experiences from Seshego Community Library, South Africa

Eddy Maepa

Lecturer

Department of Information Science

University of South Africa

and

Rhandzu Mhinga

Librarian

Technikon Pretoria, Polokwane Campus

South Africa

According to estimates by Statistics South Africa, only 33% of learners in the Limpopo Province (one of the nine Provinces in South Africa) have access to a functional school library or media centre. This has been regarded as one of the main factors which have contributed to the Province consistently producing one of the lowest pass rates in comparison to its counterparts. While there was enthusiasm amongst some teachers that the establishment of Seshego Community Library would bring some relief to educators starved of a functional library service in their schools, some teachers and learners were not as enthusiastic and receptive to the Community Library. This paper explores some of the barriers inherent in introducing a library to a community which was not previously exposed to, and accustomed to making use of its services, and making it an integral part of the teaching and learning programme. Issues of resistance to the community library's outreach programme, largely emanating from lack of motivation and a low morale amongst some teachers and principals alike, as well as an erosion in the culture of teaching and learning, are explored. There is a need to break down the existing barriers to encourage teachers and learners to make use of the Community Library's services and facilities to add value to their teaching and learning endeavours.

Introduction

This paper explores some of the challenges faced by Seshego Community Library in an attempt to integrate the Library into the teaching and learning programme of local schools. This effort was intended to reach out to local schools and encourage a culture of Library use amongst teachers and learners. Upon its inception in 1998, Seshego Community Library embarked on a massive outreach campaign to stimulate interest in its services and establish partnerships with the twenty-eight primary and high schools operating in the area. Part of this outreach programme entailed introducing teachers and learners to the Library and encouraging them to visit it and make use of its resources in their teaching and learning endeavours. It also entailed visits to local schools and regular telephone calls to teachers, to encourage them to use the Library. However, these intensive and time-consuming efforts were not met with the same enthusiasm from some teachers and principals alike. Some of the learners have also not taken active interest in the Library because of lack of encouragement by their teachers, who are not library users themselves.

With emphasis on resource-based learning, which does not encourage total dependence on the teacher as a source of knowledge, libraries have an increasingly important role to play in the teaching and learning process. Mortimore (Price, 1999,p.120) asserts that for effective learning to take place, learners should have access to information which is independent of teachers. This is the basis of outcomes-based education. While there may be quite a few hiccups in

forging partnerships between schools and community libraries in other places, Seshego Community Library is battling with problems of resistance to its outreach programme and negative perceptions about the role of a library in the teaching and learning process. Pitman & Roberts (2002, p.69) report on an entirely different experience they had in Wales, in an attempt to build a working relationship between the schools and the community library. Their efforts at teaching information skills were well received by the learners, who were very enthusiastic. There is however no mention of how the teachers responded to the outreach programme. In Seshego, the experience was totally different, with most teachers showing reluctance to participate in the project. This will be discussed in detail at a later stage in the paper.

Background

Seshego is a township situated 12 kilometres from Pietersburg or Polokwane as it is now known. An estimated 92 000 people live in this township. Like most other townships in South Africa, there are pockets of informal settlements falling within the Library's catchment area, resulting in a diverse user profile which the Library has to serve. The Library is funded by the Polokwane Municipality, and is one of the four libraries falling within the Greater Polokwane City Council. The others are Pietersburg, Westenburg and Nirvana.

Seshego Community Library, hereafter referred to as the Community Library, is housed in what was previously a community hall which was damaged by fire and remained unutilised for a period of five years. In 1997, the community hall was renovated and converted into a Community Library by the City Council, at a cost of R1 million. The Library started operating in 1998. So far, it has had a very generous budget, and is therefore well stocked, using state-of-the-art technology.

Like their counterparts in other parts of Limpopo Province, primary and high school learners in Seshego have a limited access to school libraries and media centres. There is a total of 28 pre-primary, primary and high schools in the area. Of the six high schools, only one has a functional library. Some of the primary schools have what approximates a library, with books still in boxes. This "library" often doubles-up as a staff room or a storeroom, and there is seldom a teacher-librarian or media specialist to oversee the collection, rendering it unutilised, under-utilised and obsolete, in many instances. One main factor which has led to the under-development of school libraries in South Africa, is the lack of a policy frame-work designed to underpin the provision of school libraries in the country. In its policy document, the African National Congress notes that this lack of policy has resulted in many learners being educated without access to resources, resulting in their inability to develop their information skills for life-long learning and their capacity to think critically (African National Congress, 1995, p.84).

The library s customer profile

The Library serves a diverse profile of customers, ranging from affluent professionals including civil servants to ordinary citizens from neighbouring informal settlements. These customers can be divided into the following categories:

Those who actively need library and information services by virtue of their activities or professions. These are students (especially those studying through distance education institutions like Unisa and Technikon SA); primary and high school learners, as well as teachers and other professionals in the civil service. Then there are those members of the community who have to be informed of the library and encouraged to use its services. These are the adult learners, the elderly and children. Such a diverse profile of customers presents a variety of challenges which the library has to grapple with, on a day-to-day basis. Students from tertiary institutions account for 80% of the library's customers. In order to accommodate this category of customers, the Community Library provides a study area capable of accommodating 300 students.

An agreement has been entered into, with some long distance education institutions to make basic study material available to their students through the Community Library, as it is cheaper this way (Lotz & Mhinga, 2001,p.2).

Statement of the problem

This paper emanates from observation of the response of teachers and learners to the Community Library's outreach efforts. The paper seeks to identify and explore reasons for resistance to the Community Library's outreach programme, and unwillingness by most of the teachers from neighbouring schools, to use the Library and make it an integral part of the teaching and learning programme. Barriers to effective utilization of the Community Library are also identified and explored.

Methodology

Questionnaires and interviews were used to elicit responses from teachers and learners, respectively. As a result of the sensitive nature of the topic, the researchers felt that they would not receive honest answers from teachers, if they were to interview them. There were also concerns about the anonymity of the teachers if interviews were used. Some teachers were unwilling to take part in the interviews for fear of intimidation by their principals. They were, however, willing to voice their opinions provided they could do so without having their comments and opinions directly attributed to them personally. It was therefore felt that the questionnaire would be the most appropriate research tool for the purposes of this study, as it guaranteed anonymity. Indeed, frank comments and opinions given by teachers on such sensitive issues contained in the research instruments attest to this, as will be seen later on in the paper.

For learners, interviews were used to ensure that all the questions were clarified by the interviewers and understood by the learners to elicit useful responses. The interviews also ensured that instant feedback was received by the researchers. A total of fifty teachers and fifty learners participated in the study.

Questions in the interview schedule and questionnaire sought to elicit responses on the following issues:

- extent of use (or non-use) of the Community Library and the reasons for non-use, where applicable.
- factors contributing towards non-use of the Community Library.
- the purposes for which the Community Library' services are used, where applicable.
- perceptions of the role and value of a library in the teaching and learning process.
- hindrances and barriers to library use by both teachers and learners.

Barriers to integration of the Community Library into the teaching and learning programme of local schools

It is common practice for community libraries to take on the role of school libraries by becoming an integral part of the teaching and learning programmes of local schools, in the absence of proper school libraries or media centres in neighbouring schools. This is because enormous capital expenditure is required to set up a school library, and most often, the Department of Education seldom has sufficient funds to set up a proper school library or media centre infrastructure. The enormous backlogs in the provision of school libraries and media centres are further exacerbated by past inequities created by Apartheid. It is thus more cost-effective and convenient for schools to piggyback on community or public libraries to meet their teaching and learning needs. Zaïman (1988,p.171) alludes to this phenomenon and reflects on the changing user profile of the Johannesburg Public Library. Use patterns of this library have changed from White middle class patrons to 90% African learners and students, in the past few years. This trend depicts how much students and learners have come to rely on public or community libraries to play the role of a University, Technikon or School library.

In contrast to other countries abroad where community libraries have successfully been integrated into the teaching and learning programmes of local schools (notably the rural areas of Canada and Australia), there are several barriers which manifest themselves in an attempt to make Seshego Community Library an integral part of the teaching and learning process in local schools. Some of these barriers have far-reaching implications for information provision to the learners, both in the long- and short-term. These barriers are not isolated, they are largely pervasive and can be categorised as follows:

Lack of a teaching and learning culture and prevalence of a low morale amongst teachers

The lack of a teaching and learning culture and the problem of low morale amongst teachers, are endemic to most South African public schools. This has resulted in most teachers not being enthusiastic and innovative in their jobs. Teachers are generally unwilling to teach, while learners are unwilling to learn. Failure to do school work, arriving late at school and leaving early, are some of the symptoms of an erosion of a culture of learning and teaching. So rampant is the lack of morale amongst most teachers in schools that it prompted the South African Democratic Teachers' Union (SADTU) to declare 1996 *"The year of teaching and learning"*, through which SADTU has reiterated its commitment to establishing a culture of learning, teaching and service (COLTS). The main precondition for this culture is a conducive learning environment, with relevant teaching and learning materials (including a functional library service). This intervention by SADTU was intended to restore a culture of teaching and learning, which has been eroded on a broader scale in both urban and rural schools. Several factors are responsible for this degeneration of a teaching and learning culture. Amongst others, the low salaries earned by teachers do not offer adequate incentives and motivation; lack of in-service training and staff development affect upward mobility, and there is inadequate leadership amongst some of the school principals (Cosatu Campaigns Report, 2000).

The state of affairs alluded to above is confirmed by an article in the City Press, a local Sunday newspaper. According to the article, the government laments the brain-drain which has plagued not only South African hospitals, but schools as well; as teachers emigrate to other countries in search of better salaries and working conditions. Education Minister, Kader Asmal has recently announced a plan to retain skilled teachers and encourage those who have left the country, to return. An amount of fifty million Rands (R50m) has been set aside to address this problem. This is intended to boost teacher morale by giving financial incentives to productive teachers. The proposed plan will also allow for the re-training of experienced teachers and give them performance-related salaries (Mboyane, 2003, p.4).

In a thought-provoking and frank letter to his fellow teachers, Manganyi (1998, p.5) reflects on the lack of a culture of teaching and learning, especially in township schools, and concedes that teachers, parents and the government are all to blame for the deterioration of a teaching and learning culture in the schools. He laments the poor state of laboratories and poorly equipped libraries as factors responsible for the deteriorating performance of teachers and learners, and calls for "serious changes in the leadership of schools".

As a result of the low morale also prevailing in schools in Seshego, most teachers get away with doing the bare minimum, and are not enthusiastic about their job. As a result, they are not keen on introducing their learners to the Community Library and making it an integral part of the teaching and learning process.

Unwillingness of teachers to encourage learners to use the Community Library

A consequence of the low morale amongst most teachers is reluctance to use the Community Library as a partner in the teaching and learning process. While a library is regarded by many learners and teachers in the developed world as an important resource centre in the teaching and learning process, some teachers in the developing communities do not view it as such. In spite of the fact that adequate provision of materials has been made for teachers and learners, in the form of curriculum-related non-fiction materials and subject-specific encyclopaedias, this collection is not fully utilised. Most teachers in the neighbouring schools did not react positively to the introduction and use of the Community Library as a central resource in the teaching and learning process. This is in spite of numerous costly and time-consuming outreach efforts by the Library to reach out to schools, and develop a partnership with local teachers and learners. The main reasons given by some teachers for not involving the Community Library in the teaching and learning process are as follows:

- They went through College and University without using a library and therefore do not see its value (this is often said with a sense of accomplishment and pride!)
- They do not have time to use the Library.
- The Library is too far from their schools and most of their learners are too young to travel to the Library on their own (The furthest school from the Library is 3 kilometres away).
- It will give them added responsibility which they are not willing to take.

The use of the Library will transform the teaching and learning process in schools, and inevitably lead to an increased work-load for the teachers, as it means they have to spend more time in the library themselves, make regular visits and do constant liaison with Library staff.

A study conducted by Bristow (1992, p.78) in selected schools in Limpopo Province, presents very disturbing findings. She found that only 31% of teachers often used the school library for preparation of their lessons, and only 18% of the teachers referred their learners to the school library, where it existed. More than ten years down the line, very little has changed since the study was conducted. Admittedly, such unwillingness to form a partnership with the Community Library may stem from various factors, including the teachers' previous unpleasant encounter with the library, at University and College level. Best (1989, p.15) makes the following valid observations regarding this issue:

...If students leave college with memories of the library as forbidding and stressful...they cannot be expected to promote positive attitudes to library use amongst their pupils. They will be unlikely to use the library themselves, and even less likely to give it prominence in the learning experiences they design for their pupils.

The reality is that most of the teachers were themselves not exposed to a library during their training at College or University. This was confirmed by some of the teachers who participated in this study, which investigated their perceptions and attitudes towards libraries. Mbambo (1990, p.11) refers to this phenomenon as a self-reinforcing cycle, in which teachers who have not been exposed to a library during their schooling, and have not been exposed to a library during their training at College or University, make the library remain peripheral to their teaching, just as it has been throughout their entire lives. Some teachers do not feel competent and are not keen to use the information sources in the Community Library, having not refined their information seeking skills themselves, during their training years. As a result, being non-users of the library themselves, they do little to develop their learners' information skills. Inevitably, learners will emulate their teachers' actions as they learn by observation. Emphasizing the importance of a library during their pre-service training, would have gone a long way in changing the teachers' perceptions of the role of a library in the teaching and learning process.

With this kind of role models, we are likely to have a generation of non-users of the library, since the learners are not exposed to positive role models who will instil a culture of library use in them.

Several complex questions to which there are no ready-made answers, need to be addressed by the Community Library's staff. These are:

- What strategies should the Library adopt to develop a partnership with teachers, over and above the current outreach programme already in place?
- How does one convince teachers and principals that the Community Library can add value to their teaching and learning experience, and that the results of library use are not always instant?
- Is it possible at all, to change some of the teachers' perceptions of the role of a library in the teaching and learning process?
- How does one change a deeply entrenched mind-set developed over a long period of time, which informs the teachers' negative perception of the role of the library?

While it was possible for teachers to go through their schooling without ever using a library, during their school days, today's learner is exposed to a diversity of information, in both print and electronic formats. The information environment is very dynamic, diverse and more challenging than it was in the past. The demands put on learners are even higher and will intensify when they go through to a tertiary environment. Failure to expose the learners to libraries before they go to tertiary institutions presents huge problems with regard to lack of library literacy and information literacy skills, as the learners fail to cope with a complex information environment they are confronted with at tertiary level.

Lack of co-operation between teachers and the Community Library staff

In some instances where some teachers do send their learners to the Library to search for information, there is a lack of co-operation between the teachers and Library staff. Some teachers fail to check availability of materials in the Library before they send learners out to search for information on certain topics. There is also a lack of feedback from those teachers who send their learners to the Library to get help with their homework and school projects.

The Library staff usually gain no information on how their services are received by the few schools who make use of them. This makes it difficult for them to know what further services are required by the teachers and learners, and what areas of dissatisfaction exist, in order to improve on service delivery. There is also very little communication between the teachers and the Library staff on current and future school projects which would enable the Library staff to plan and select relevant materials for such purposes, in advance (Chipana, 2003).

This outcry should not be seen as an attempt to criticise teachers unduly. Rather, it is an attempt to raise awareness of some of the problems encountered with most of the teachers in encouraging them to use the library as an information resource to enhance the quality of learning and teaching in their schools. The efforts made by a few teachers to integrate the library into their curriculum are acknowledged. However, these are an exception, rather than the norm. Needless to say that such cases are few and far between.

Lack of support for the Community Library s outreach programme by some of the school principals

It is virtually impossible to introduce the Community Library to teachers and learners without the support of the school principal. As leaders in their schools, principals are expected to spearhead efforts aimed at improving the teaching and learning process, and are expected to lead by example. However, some of the principals approached by the Community Library in its effort to reach out to neighbouring schools, showed no interest in encouraging the teachers to integrate the Library into their teaching and learning programme, even in the absence of libraries and media centres in their schools. This stemmed largely from their own lack of exposure to libraries during their schooling. Indeed, some principals pointed out that they went through College and University without using a library, and they did not therefore see its value in the teaching and learning process, just as some teachers did! This is very disturbing coming from people who are often perceived as role models. Such role models contribute very little to the cultivation of a reading culture amongst the learners, as perceptions like these are likely to filter through to the teachers and subsequently to the learners. In a frank assessment of principals' perceptions and attitudes towards school libraries, Hartzell (2002, p.92) contends that these have been shaped by several forces:

The first is their own experiences in school libraries as children, in which they perceived the library as peripheral to the school. The second is the effect of their professional training, in which the library's role in curriculum instruction was conspicuously absent. The third is the nature of the teacher-librarian's work, which is to enable and empower others. The fourth is the low profile teacher-librarians and school libraries have in the professional literature read by teachers and administrators, which prevents them from updating their sense of what the library really is and can do...

In relation to the American experience related by Hartzell, most principals in Seshego also have a limited understanding of the value of a library in the teaching and learning process. This became clear from the data collected during this study. In a related study, Radebe (1997, p.222) found that 61% of the school principals were not supportive of the school library, and even discouraged the teacher-librarians' efforts to persuade their colleagues. The sad thing is that it is nearly impossible to change perceptions. As Hartzell (2002, p.105) has rightly observed, "neither time nor good work, are likely to alter an uninformed principal's perceptions of libraries and librarians". He further contends that "the only way to change the principals' perceptions is to assault them directly, repeatedly, and from a multiplicity of directions". It will take some time and effort before there is a change in attitude and perceptions from the principals, because people's preconceived notions usually determine how they select and interpret information already consistent with their beliefs and perceptions, which are extremely difficult to change.

Using learners to search for teachers' information needs

In a few instances where teachers refer the learners to the library, it is only so that the learners can search for information which the teachers intend to use for their private studies. This is rather unfair, considering the fact that the learners have not yet refined their information seeking skills. Some of the queries presented to library staff from grades as low as Grade 5 (standard 3), clearly indicate that some teachers who are not keen on using the library, use the learners to search for information on their behalf. Such information is then used for compiling assignments for the teachers' private studies.

While sending learners to the library to search for information on the teachers' behalf may be done in good faith, and may be a well-intentioned way of encouraging the learners to use the library, it presents a number of problems and may instead drive the learners away from the Community Library:

- It instils fear in the learners as they have to get the required information at all costs, to avoid being reprimanded by the teachers. It does not therefore arouse the learners' interest in exploring the given topic.
- It is very confusing to the learners as they are not sure of the information task they are expected to perform. It therefore has a potential of driving them away from the Library rather than encourage them to use it, since they usually cannot relate to the topic, which is usually very complex.

Sending learners who are in higher grades to search for information on the teachers' behalf might be a good way of introducing them to the library, and acclimatising them to complex information tasks they might have to handle at tertiary level. But, sending learners to do this at lower grades is not acceptable, no matter how well intentioned the practice might be. Grade 12 (standard 10) learners, may not have severe difficulties comprehending the topics alluded to earlier, as opposed to their grade five counterparts, for instance.

The tendency by teachers to be pre-occupied with improving their own qualifications is referred to by SADTU, as a qualifications "paper chase", and usually results in teachers being more committed to their studies, than to the learners' needs (Cosatu Campaigns Report, 2000).

Sending learners to search for information which is beyond their comprehension

Another barrier to library use by the learners is the growing tendency to send them to look for information which is way beyond their comprehension. The following examples of topics given to learners to search in the library indicate that they are expected to search for information which clearly is above their level of comprehension and has nothing to do with their curricula:

- Grade 3 (Standard 1) learners sent to find information on *communicable diseases*.
- Grade 5 (Standard 3) learners sent to find information on *how apartheid influenced the South African society, politically, socially and economically*.

It would be presumptuous to expect that a learner who has had only three years of schooling, would know what a communicable disease is, especially if English is not the learner's first language. In both instances mentioned earlier, the learners were not given any guidance, by way of explaining and simplifying the terminology to make it understandable to them before they were sent to the Library. Needless to say that queries and information tasks should be formulated at a level commensurate with the learners' ability and comprehension skills, to enable them to handle such queries.

Ill-defined and ambiguous queries presented by learners sent by teachers to seek information

Some of the queries which teachers send the learners to find information on, are not clearly defined, and are a source of confusion for both the learners and the Library staff alike. The following is an example of a query received by the Library, and is indicative of this growing tendency:

- Grade 6 (Standard 4) learners sent to the library to find information on *how the Arrive Alive campaign relates to science*.

While the above might probably be clear in the mind of the teacher who sent the learners to the Library, it is fairly incomprehensible and presents problems to the learners and the Library staff who are expected to help them. The Arrive Alive campaign is a road safety campaign run by the Department of Transport, and has more to do with road safety and very little to do with science, *per se*. Ill-defined and ambiguous queries may affect the learners' confidence level and discourage them from using the library because they do not understand the information task they are expected to complete. As a result, they are pre-occupied with getting answers to avoid being punished by the teacher. One only needs to look at the fear written on their faces when they come to the library, to ascertain the insecurity and discomfort they feel presenting such ambiguous queries.

Unwillingness of some parents to pay their children s Library membership fees

Some of the parents who have not been exposed to a library before, are reluctant to pay membership fees for their children to allow them full access to the Community Library's resources. This can be attributed to their own lack of exposure to a library, which has shaped their lack of understanding of the value of a library. They thus cannot see the benefits of giving their children full access to the Library's resources. The Library charges a membership fee of only R10.00 per annum, which works out to less than R1.00 per month. This is indeed a negligible amount of money, considering how much it costs to buy the Library's resources. Be that as it may, some parents cannot genuinely afford to pay this amount to register their children with the Library, because of high levels of unemployment and poverty. Like in most community libraries, everybody has access to Seshego Community Library's resources, but loan services are only extended to registered members.

The parents' failure to pay for their children's membership fees has resulted in an odd tendency by children to copy story books from cover to cover, because they are not allowed to borrow them as they are not registered members. On any given afternoon, scores of young children flock to the Library to engage in this time-consuming, tedious and cumbersome practice. The children have an unquenchable thirst for knowledge. Copying the storybooks symbolizes their desire to read the story over-and-over again, to nurture their reading skills. However, much as the children are enthusiastic to use the Library, some of their parents either do not share their enthusiasm, or are unable or reluctant to pay for their membership fees. This makes it impossible for the children to have full use of the Library's services.

Learners perceptions of the value of the Community Library in the learning process

Contrary to views held by most of their teachers regarding the role of the Community Library, the learners interviewed were more optimistic about its role in the teaching and learning process, and had nothing but praise for the Library. Some learners did indicate that their teachers do not at all encourage them to use the Community Library, and that they had come to the Library out of their own free will. Parents are also not playing their part in encouraging their children to come to the Library, evident in the learners' responses. Learners find the Library a quiet study area, with ample study space, where they can do their homework, with access to relevant information sources. They further indicated that the Library is also far from their noisy and often cramped homes, where they are usually required to help with household chores when they should be doing their school-work. Of the fifty learners interviewed, only one remarked that the Community Library was unimportant, as it was not helpful. This could perhaps be attributed to the learner's unpleasant experience in the Library, the nature of which was unfortunately not disclosed. Learners need to be constantly encouraged by teachers and their parents, to make effective use of the Library. Abdication of this responsibility by teachers and parents will only prevent the learners from taking advantage of resources which will make them critical thinkers and lifelong-learners.

Implications of non-exposure of learners to a library environment

The lack of exposure of learners to a library environment has far-reaching implications. Learners who are not exposed to a library during their early years of schooling are known to struggle when they get to tertiary environments, which are characterised by exposure to high volumes of information in various formats. Lacking information literacy skills, these learners will no doubt find it difficult to handle huge amounts of information associated with tertiary environments. This will also affect their ability and confidence in using libraries in the future. This is in fact a disservice to the learners who look upon their teachers as mentors who should shape their destiny and prepare them for challenges

which lie ahead. They will undoubtedly find it difficult to cope with the demands of a society characterised by rapid information explosion. This situation will inevitably create a generation of non-users who will not be able to function effectively in an Information Society.

Conclusion

It is clear from the assortment of barriers alluded to previously, that the Seshego Community Library has a lot to grapple with, in its attempt to create a culture of library use in a community which has very little experience with regard to exposure to, and use of libraries. This resistance to the Library's outreach programme is indeed a barrier which needs to be removed, to make the Community Library an integral part of the teaching and learning process in the local schools, especially in the absence of a proper school library infrastructure in Seshego and other parts of the Province. Some of the barriers have a lot to do with people's mind-sets and perceptions, which are developed over many years and are very difficult to change.

It is worth noting that this resistance to Library use, should be seen against the back-drop of library use amongst African people in general. The fact that Africans are generally not keen users of library and information services, has been documented in the literature on African librarianship, by amongst others, Mchombu (1982). As a result, any effort to integrate a library into the daily lives of African people, should take into cognisance, issues of orality and the lack of a reading culture commonly found in African communities. However, experiences with African children in some libraries in South Africa, have proved that if children are introduced to a library at an early age, they gradually develop a reading habit, which shapes them into regular users of libraries. Unfortunately, most of the children in Seshego, are missing out on this opportunity. Some intervention from the Provincial Department of Education would go a long way to resolve some of the problems resulting from lack of interest in using the Community Library, by the teachers. There only needs to be a will from those in positions of authority, to intervene and make a difference in the lives of the learners. A formal and open endorsement of the Community Library's outreach programme by the Department of Education might help in changing the teachers' perceptions and attitudes towards the Library. At the moment, the Library is regarded by most teachers as an add-on, and is thus perceived as being peripheral, and not at the core of the teachers' endeavours.

Failure to intervene will diminish the effectiveness of the new curricula which are being introduced in schools. These do not require the teacher to be the sole source of knowledge, but require the learners to independently explore various fields of knowledge. The Community Library will therefore be an important resource, without which meaningful learning will not take place, especially in schools which do not have access to a school library or media centre. The challenge therefore, is to break down barriers to library use, in school libraries where they exist, and other types of libraries which are at the learners' disposal; in the absence of libraries in their own schools. In this way, we will be able to develop a generation of library users who will be able to think critically and become life-long learners.

References

- African National Congress. (1995). *A policy framework for education and training*. Manzini: McMillan-Boleswa.
- Best, R. (1989). Library use and teacher training. *Education Libraries Journal*, 32(3), 6-24.
- Bristow, A.P. (1992). The role of the school library in development. *Mousaion, Series 3*, 71-82.
- Chipana, M.S. (2003). Librarian, Seshego Community Library. Personal interview, 06 February.
- Cosatu Campaigns Report. (2000). Unions committed to service delivery. Retrieved March 07, 2003, from <http://www.cosatu.org.za/docs/2000/sdcamp.htm>
- Hartzell, G. (2002). The principal's perceptions of school libraries and teacher-librarians. *School Libraries Worldwide*, 8 (1), 92-110.

- Lotz, M., & Mhinga, R.S. (2001). The realities of bringing books to the people: the Seshego experience. Unpublished paper read at the *LIASA Annual Conference*, Caesars Gauteng, September.
- Maepa, M.E., & Mhinga, R.S. (2002). Challenges and prospects in providing community information services: a case study of Seshego Community Library. Unpublished paper read at the *LIASA Northern Province Conference*, Phalaborwa, 5-7 June.
- Manganyi, M. (1998). We are all to blame for education crisis. *The Shopsteward*, 7(1), 4-6.
- Mbambo, B. (1990). Librarianship as a component of teacher education. *Zimbabwean Librarian*, 22(12), 11-13.
- Mboyane, S. (2003). Moves to plug SA's crippling brain-drain. *City Press*, 02 March, 4.
- Mchombu, K.J. (1982). On the librarianship of poverty. *Libri*, 32(3), 241-250.
- Pitman, N., & Roberts, N. (2002). Building relationships: forming partnerships between the school and public libraries. *School Librarian*, 50(2), 69-70.
- Price, G. (1999). The role of the library in the effective primary school. *School Librarian*, 47(3), 119-120.
- Radebe, T. (1997). Experiences of teacher-librarians in the work-place after completion of the school librarianship programme. *South African Journal of Library and Information Science*, 65(4), 218-226.
- Statistics South Africa. (1998). *Living in the Northern Province: selected findings of the 1995 October household survey*. Pretoria: Statistics South Africa.
- Zaaiman, R.B. (1988). *The use of libraries for the development of South Africa*. Pretoria: University of South Africa.

Biographical Notes

Eddy Maepa holds a PhD in Information Science from the Rand Afrikaans University in Johannesburg. He started his career at the University of the North working in the Library as a subject reference specialist for Economic and Management Sciences. He was later transferred to the Department of Information Science where he taught for thirteen years and acted as Head of Department, before joining the Department of Information Science at the University of South Africa (Unisa). His research interests include rural information needs, rural information provision and impact of ICT's on rural communities. Apart from teaching, he is also involved in Consultancy work and commissioned research; and has worked as a research and training consultant for the Universal Service Agency, the International Centre for Agriculture and Bio-science (CABI), as well as the National Department of Education. His association with Seshego Community Library was based on an experiential training programme initiated while he was still at the University of the North. Email: maepame@unisa.ac.za

Rhandzu Mhinga holds a B.Bibl(Ed) degree from the University of the North and a B.Inf(Hons) from the University of South Africa. Rhandzu started her career as a Librarian in 1993 at Giyani College of Education. In 1996, she took up the position of Senior Library Assistant with the Polokwane City Library. She was promoted to the position of Senior Librarian and transferred to head the Seshego Community Library in 1998. She held this position until March 2002, when she took employment at Technikon Pretoria, Polokwane Campus. She has been greatly influenced by working with young children who did not grow up with books. She also has a strong interest in training and changing people's perceptions about libraries and library services. Email: mhingar@techpta.ac.za

Don't Buck It - Bend It: Using the Established System to Increase Your Influence to Create the Working Environment You Desire

Dianne McKenzie

Teacher Librarian

Australian International School

Hong Kong

In many schools the school librarian works in isolation, has a very busy schedule and is often overlooked for budgeting, decision-making and day-to-day communications. This leads to many feeling a sense of powerlessness over their own situation and self worth as a professional, with seemingly little opportunity for change. This paper addresses these issues and expounds on why influence is important for school librarians to achieve their goals and aspirations to bring their libraries to the high standard they strive for. The main body includes practical strategies to slowly but surely increase the influence of school librarians with the principals and other staff so they can be recognized as key players in children's education at their schools.

You as a school librarian have a unique role in the school - you interact with staff, students, parents and administrators, all day. You have a whole school perspective on what is happening and resources required, you know what is being taught by whom and when. You have the ability to spend lots of money on required resources, and to submit budgets for increases. You are autonomous in your library, it is your own little empire and you can organise it the way you want and have the policies and procedures you need to make things run the way you like them to. Within that arena you are the boss and you wield plenty of influence inside its walls – woe betide anyone with a lost resource or sticky fingers, and look out those rebel-rousers, you will be throwing them out in no time.

What happens when you walk outside? Do people know who you are? what your agenda is? what your skills and passions are and what you need to be able to make your library a better place for education for the whole school? Does your principal know and support your requirements fully, do they ask you for an opinion on what the ICT policy should be or the curriculum policy or changes? Do they listen to you when you need to ask for more money or changes to your day? Are they open to your suggestions? Do the staff know you and your passions, if you wanted to ask them a favour would they be happy to help? if you asked them to trial an innovative idea in the classroom would they prepared to give it a go just because you think its a good idea? How much influence do you wield outside your library in the wider school community?

Influence is not something we can give ourselves, it comes through the way in which others perceive us (Langford, 2000). Influence is measured by the desired behaviour and actions you can elicit from others. It is subjective, but at all times present, and is totally dependent on relationships and trust at any moment (Hartzell, 1997; Langford, 2000). Influence gives rise to increased opportunities, it gives a measure of control over our professional lives and empowers ourselves and others (Langford, 2000). Having influence in a work environment is akin to having the master key to everything - doors will open, how fast and smoothly they open depends on the depth of the relationships and the perceived value of this relationship. Influence in our work is paramount to having a high self-esteem and motivation to do better (Hartzell, 1997). Without influence a school librarian cannot be visible, without visibility, school librarians and their domains will continue to go unnoticed and undervalued (Langford, 2000; Hartzell, 1997). How visible are you and your library?

Influence is a significant agent for change to take place. People who are able to successfully implement change have influence with others who supported the motion and worked towards its success. Schools are full of changes, and they are continually changing. Fullan (1999) describes them as 'being on the edge of chaos' because there is so much change going on. In such a dynamic environment people expect change, however in most cases they don't like it and will only cooperate when it becomes necessary or they have a personal interest and can see the vision (Swanepoel, 1998). As a school librarian with your contacts with so many, your unbiased approach to curriculum, your skills in collaboration, sharing and learning you have the most potential to influence others in seeing the vision and gaining support for your ideas and motions for change.

So how can the teacher librarian increase the influence they have in the school without seeming pretentious, overstepping the mark or even undermining some ones else's authority?

The key to influence is relationships and making every relationship intentional. You gain influence by building, maintaining and expanding your network of relationships (Searcy, 2002). With this in mind, make an effort to know the people in your school from the principal to the caretaker. Know their names, say hello every time you meet with them, ask about them and their family, have small talk about the weather. Let them know you know them and care about them. Have lunch or morning tea in the staff room, or invite others to the library if you can't get out. As you build your relationship with them you will become closer with some, you will learn of their interests and concerns, their passions.

To build on and maintain these relationships, focus on the needs of these people (Searcy, 2002). Where possible look out where you can fill a need or want in other peoples lives. Keep a look out for special items of interest that might cross your path which will benefit them - articles, lesson ideas, resources bought just for their module or unit. Ask how you can meet a need of theirs - would they like help in planning a unit? finding a resource? "Going the extra mile" works in building relationships two ways. Firstly it indicates to the person that you are aware of and care about their needs - building the relationship on an emotional level. It also works on the theory that "you can get everything in life you want if you help enough other people get what they want" (Ziglar, 1984). Hartzell calls this the theory of reciprocity - if you help people, they will feel to be in your debt. Bonanno (1998) names it the "law of indirect return." It is naturally occurring human trait. To be able to have many people feel they are in your debt builds your potential influence when it comes to collecting the debt through favours and support, in many cases this can happen unexpectedly. Building a network and reciprocity with some people will be more important than others, however, all relationships are vital (Hartzell, 1994).

The relationship with your principal is essential to the success of the library and for the entire instructional program of the school (Hay and Henri, 1995). It should therefore be one of the most intentional and nurtured relationships that you have in your professional life. Treat your principal as a potential ally to be courted and supported rather than as an enemy which needs to be defeated (Hartzell, 1994).

The teacher librarian is usually not in an executive position, and they usually do not have a head of department overseeing their activities and being an advocate for them. The school librarian in most cases works directly with the principal regarding budgeting, policies, decisions, new programs, timetables and other key issues. It is imperative that the principal is aware of the library and its needs and is able to support initiatives and programs. To do this they need to know what they are. The school librarian has a responsibility to sell their role and their program to the principal to gain maximum support in good and lean times and to develop a relationship that is mutually influential for good.

Some suggestions by Hartzell (1994) to develop this relationship include having continual contact with the principal on meaningful issues such as monthly reports, meeting at the beginning and end of the year to talk through the mission of the library, goals and objectives for the year and evaluation. Term meetings or on as need basis to discuss initiatives which may be possible, throughout the year passing on vital information about the local education community or education in general, targeting articles and research on specific issues current on the school agenda, inviting the principal on purchasing opportunities and conferences. Come to him or her with possible solutions to your problems, rather than just problems. Back this up with a written action plan and act on it with their support, follow the job through and complete it to the best of your ability (Boyd, 2002).

Make the school look good through the library. Initiate successful literacy programs, be a speaker at conferences, become published in professional journals, offer parent workshops, enter competitions on behalf of the school, make the library a showplace of education. Participate on school committees and development groups, take an extra curricular activity. Invite the press to report on what your library is doing for education and ensure that your vision is closely aligned with that of the principal. Through all of this ensure you use the correct channels of communication and authority where initiatives are concerned. In everything you do focus on the benefits to the educational outcomes and the children. Through participation in these activities you are demonstrating that you can be relied on to be an advocate for the school and the principal. You can be trusted. You have integrity. You are visible.

Hay and Henri's (1995) study found that principals were prepared to rely on the professional judgment of the school librarian and support them as long as the teacher librarian demonstrated they were both reliable and credible. By being enthusiastic, consistent and striving for excellence in your professional life through the aforementioned activities, you are engaging the principal's attention while moving him or her in a positive direction (Bonanno, 1998; Searcy, 2002). You are empowering the principal through your good works and making them and the school look good, this will extend your influence through earning their respect and goodwill. No one is influenced by that which they ignore or do not respect (Searcy, 2002).

Good relationships with other staff at the school are also vital for survival (Hay & Henri, 1995) Build your relationships with your teaching peers. Talk to them about what they like, dislike, their problems, what they feel about issues, connect on an emotional level. This information will be vital to knowing them and their passions, catering to their needs and for discerning current and potential allies (Cohen).

Become visible to the staff outside of the librarian role—be an active part of the sport program, work with staff on projects, committees and groups, socialize with them, offer to teach skills that you have through staff development days or informally. Remember what people say to you that expresses an interest, need or a problem, even in casual conversation. If possible follow it up with something that meets that need, or is a solution to the problem. Talk with people about themselves and what interests them, ask questions, be prepared to learn and listen. Lisa Kirk said “a gossip is one who talks about others, a bore is one who talks to you about himself and a brilliant conversationalist is one who talks to you about yourself”. Become a brilliant conversationalist and your influence will grow without too much effort.

Within your role supply a service which is helpful and timely. This will ensure that staff rely on its use and become accustomed to its benefits. Make the library the centre of the school by helping teaching staff dependent on what you have. Let them know about the professional journals available, even copy some of them to pass onto the relevant people. Publish a staff newsletter or web page outlining the new resources, how they can be used and who they are targeted for. Schedule staff development days to teach how to access the resources they need, and educate how best you can meet their needs. Publish the policies and procedures of the library, ask for staff comment, set up a friends of the library group where they can discuss issues, resources and policies. Invite people to be involved in the formation of the library website so it will cater to their needs, not the libraries.

Resources are a school librarians best tool for building influence. They know what is available, they know who needs it. Matching these entities successfully will in itself build influence. Going one step further and making this pool of resources larger and more targeted increases the potential for influence (Hartzell, 1994). Aggressively showcase the resources. Staff must know what you have and what you offer, they cannot attach value to the things they don't know about. They will be more likely to support a service which they have come to rely on than one which they do not know about (Hartzell, 1994).

The non-teaching staff are also important to have a good relationship with. They have resources and services you need sometime, the law of indirect return affects you as well. Be good to these people, they can make you life as easy or difficult as they wish. A good example given by Hartzell (1994) is the principal's secretary, this person will be the one who will allow or block your road to improving your relationship with the principal. Their resource is the principal, and their influence is great.

Parents and students are also an important part of the school community who will support you when in need. Allowing parents to access the library resources gives you access to them, to get to know them. Invite them to help in the library as volunteers, they will then observe first hand what it is you do and how important it is to the school. Run workshops on skills they want to learn, have the library open on parent teacher nights for parents to visit, browse and meet you. Greet them, prepare a display of new resources, students work, serve hot drinks with snacks. Personalize the evening by talking to them about what they want to talk about. Parents can be powerful allies when it comes to budget cuts or improvements if they see a need.

Students are the most important part of the school—they are why it exists. Building influence through students will have an indirect influence on their parents and their teachers. Help the students be a part of the library through volunteer programs, take on board their suggestions for resources they want to access, offer programs of self-improvement, help them make sense of information. Make the library a place where they want to spend time, make it a place of learning. The students will express their appreciation through their actions - they will come and with your support they will be high achievers. This will make the school look good, in turn the principal and staff look good, and your influence will increase.

There are a number of other aspects about building relationships which need to be considered. One of these is relationships are forgiving and flexible (Searcy, 2002). No relationship will be perfect, so you must be willing to overlook imperfections in others and also be willing to apologise, forgive and ensure the relationship continues - this may mean being humble sometimes. If someone crosses you, find out why and talk through the problem with them, if you offend someone and they have let you know, apologise and move on. You need to remember that every relationship is an investment and you need to keep these investments working to be worthwhile.

Relationships are as unique as each person (Searcy, 2002). You need to treat each person as an individual with their own needs, desires and have relationships that reflect this difference. This behaviour will develop influence through respect that you are aware of individual needs, and everyone is given equity dependent on their requirements.

Good relationships are built on encouragement and empowerment (Searcy, 2002). How can you let people know they are doing a great job? To empower others you must hold them in high esteem and connect on an emotional level.

Relationships are a major player in building influence in a community, through relationships there are also a number of factors which have been identified as being essential for building influence.

Enthusiasm for the job, project, or need is contagious. People are drawn to someone who has a passion, a mission. They want to see what the excitement is about and they may even become as enthusiastic about it. If you believe in where you are going and you present it in an enthusiastic manner people will follow and support you (Searcy, 2002).

A person who commits to producing the best possible results through attention to details, and follow through stands up and demands attention. This makes you visible, earns you respect and you are viewed as having integrity. This in turn increases your influence. "Every job is a self-portrait of the person who did it. Autograph your work with excellence" (unknown). Striving for win-win situations in relationships is also essential for influence building. People find it hard to work with someone who is inflexible and stubborn and who likes to win at the expense of everything else. Ensuring the terms are equitable in every situation of conflict and compromise, and no one feels like a loser will build influence as you will be seen as fair, flexible and having integrity. What you may have lost in the negotiation will be invested in something far more lasting, meaningful and useful.

Being innovative and proactive are also important in the building of influence. Taking the initiative involves moving out of your comfort zone into areas of uncertainty, it benefits others as much as the initiator. It builds your influence in the school being seen as the brave one. Not everyone can initiate change because they are afraid of failure. Being a model of this behaviour will influence others to try to initiate programs or changes. Initiative is valued if it prevents problems, solves problems, multiplies the value of existing resources, makes jobs easier, makes others look more effective and helps them succeed. On this value rides more influence for the initiator. Having many small successful initiatives earns respect and credibility, so start small and often. When the opportunity arises for someone to initiate a

large project, you can take on the challenge, knowing you will have support through your previous earned influence and reputation. Hartzell (1999) states that people who have more initiative are allowed more failures than people who rarely take the initiative.

Proactive people anticipate and prevent problems, they identify what is needed before others, they try things, take the lead, take risks and follow things through. They persevere in pursuit of the objective with an understanding there are many equally effective ways to reach it (Hartzell, 1999). They act on principles and values rather than emotion or circumstance (Covey, 1997). Proactivity and initiative are usually together, and are highly valued by superiors. The teacher librarian needs to be proactive and effective in communicating their role to the principal and the wider community. As J. Paul Getty noted, "the man (or woman) who comes up with a means of doing or producing almost anything better, faster, or more economically has his future and his fortune at his fingertips." If humble and working for the good of the organisation, people respect innovators and proactive people, with this respect grows influence. "When your image improves, your performance improves" (Ziglar, 1984).

Taking responsibility for your own decisions, actions and innovations even if they were not successful in achieving their desired outcome will earn you a reputation of having integrity and honesty as will acting on your beliefs. Influence is built on integrity.

Striving for visibility and influence does have the price of continually being in the limelight, becoming busier, and constantly in demand. More is expected of you, and you need to continually maintain your influence through your relationships and commitments, however, when you submit your proposal for a substantial increase in budget, or for an innovative program, or for more staff and it is overwhelmingly supported by the principal, staff parents and students, you know it will be worth it.

References

- Bonanno, K. (1998). Nurturing your professional Edge: Exploration of the vision. "Failure is not an option." Retrieved on 11/10/02 from http://www.kb.com.au/cp_nuture.htm.
- Boyd, S. (2002). Developing Power and Influence for the professional teacher librarian. In D. Singh, A. Abdullah, S. Fonseka, & F. de Rozario (Eds.) *School Libraries for a Knowledge Society: Proceedings of the 31st annual conference of the International Association for School Librarianship and Sixth International Forum on Research in School Librarianship*, Petaling Jaya, Malaysia.
- Cohen, R. The six habits of highly successful collaborative teacher-librarians: A new attitude to accomplish CPPT in the 21st century.
- Covey, S. (1997). *The 7 habits of highly effective families*. New York: Golden Books.
- Fullan, M. (1999). *Change forces*. Philadelphia: Taylor & Francis, Falmer Press.
- Hartzell, G. (1997). The invisible school librarian: Why other educators are blind to your value, Part 1. *School Library Journal*, November, 24-29. Retrieved from http://www.slj.com/articles/articles/19971101_5664.asp.
- Hartzell, G. (1997). The invisible school librarian: Why other educators are blind to your value, Part 2. *School Library Journal*, December, 24-29. Retrieved from http://www.slj.com/articles/articles/19971101_5693.asp.
- Hartzell, G. (1994). *Building influence for the school librarian*. Ohio: Linworth Publishing.
- Hartzell, G. (1999). Being pro- active. *Access*, November, 11-15.
- Hay, L., & Henri, J. (1995). Leadership for collaboration: making vision work. *Proceedings of the 61st General Conference of the International Federation of Library Associations*. Retrieved from <http://ifla.org/IV/ifla61/61-hayl.htm>.

Langford, L. (2000). Power is not a naughty word: Reconfiguring relationships in your workplace. Retrieved September 4, 2002 from <http://athene.csu.edu.au/~llangfor/papers/paper10.html>.

Searcy, N. (2000). The key to influence. *Smartleadership*. Retrieved September 12, 2002 from <http://www.smartleadership.com/magazine/view.asp?id=1>.

Searcy, N. (2001). May I have your attention please. *Smartleadership*. Retrieved September 12, 2002 from <http://www.smartleadership.com/magazine/view.asp?id=68>.

Swanepoel, M (1998). The digital library: The next sigmoid curve of the information profession. Retrieved from <http://educate.lib.chalmers.se?IATUL/proceedcontents/paperirvine/marinus.html#ref5>.

Ziglar, Z. 1984. "Secrets of closing the sale."

Author Note

Dianne McKenzie is a teacher librarian at the Australian International School Hong Kong who has lived in Hong Kong for 9 years. She completed her masters in Teacher Librarianship in 2002 through CSU in Australia, previously taught PE in Australia. Her main interests are cycling, travelling and enjoying life. She has 4 children aged from 8 to 13 and is married to Wayne.

May E. MooreLibrary Resource Centre Advisor
Ministry of Education
Sultanate of Oman

Since 1970 many public schools, public and private colleges and universities, and some public libraries, have been built in Oman. In all these schools there is a semblance of a library. An educational reform began in 1995 with the building of 107 new schools that emphasise a child-centred approach to education and feature English in Grade 1, a fully equipped Learning Resource Centre, and strong curricula in science, maths, and computer studies. Deriving the maximum educational and investment benefits from the LRCs, however, depends on developing educationally sound school libraries with adequately trained staff, information skills curriculum, materials, site space, program, and staff development.

Introduction

Many interesting situations arise when one is trying to establish a school library curriculum and training program in another country, especially one with a totally different culture and language than your own. Problems may arise because one lacks knowledge about the country and resources, and/or the ability to communicate in the language.

In February 2001, the Ministry of Education in the Sultanate of Oman hired me as the Learning Resource Centre (LRC) Advisor. My job officially was to advise those with whom I work in the Educational Technology (ET) Department about successfully developing and implementing school libraries in the Sultanate and to train regional school library trainers about how school libraries should work. In addition to this, I decided to write a curriculum, a continuum of information literacy skills, so that a teacher-librarian could establish a suitable educational LRC program. Accomplishing all these goals has been challenging for a variety of reasons. One of these is that formal education in Oman began only about 30 years ago when the present Sultan, His Majesty Sultan Qaboos, assumed the leadership of the country. Many of the teachers and other stakeholders in the educational system, therefore, have no long-term educational history, knowledge, or experience.

Since 1970, many public schools and private and public colleges and universities have been built. One can find the semblance of a library or LRC in all these institutions. Even public schools in some remote areas are reached and serviced by two bookmobiles. In Muscat, the capital of Oman, there is also a technical library that anyone can use, and there is another public library housed in the newest public institution, the Sultan Qaboos Mosque, and in Ruwi, a part of Muscat. Here there are books for all ages and forty computers with Internet access for anyone to use. Neither of these public libraries, however, is a lending library.

Like many other countries around the world, Oman is presently reforming its educational system. Efforts are being made to provide all population groups and regions of the country with equal educational opportunities. Special attention is being paid to the content of education, the methods of instruction, educational standards and equality, and the principle of lifelong learning.

The Basic Education reform began in 1995 with the building of new schools that emphasise a child-centred approach to education and feature strong curricula in science, maths, and computer studies. English is taught beginning in Grade 1, and each school has a LRC (ECS, 1995). These Basic Education schools are gradually replacing the original General Education schools whose almost totally Arabic curricula follow the teacher-centred and rote teaching methodology with an “exam only” approach to education. Some of these General Education schools have no library.

Here in Oman discussion of the means for developing quality educationally sound school libraries centre around staff, program, materials, and site space. This paper will address each of these factors through commenting on the present situation, examining some of the existing issues or difficulties that are now being addressed, and suggesting some possible solutions. Hopefully, solutions to the problems incurred during the developmental stages of the LRCs will begin to narrow educational gaps and break down barriers so as to better equalise the opportunities for all Omani students to become information literate, lifelong learners.

History of Education in Oman

Thirty years ago, there were only three schools in Oman with a total of 909 male students and about 30 teachers. Previous to this time, leaders of mosques conducted education under trees because there were no formal school buildings. Thirty years ago there were no libraries as we know them; there would have been a few copies of the Koran in the mosques, but these would not have been accessible to the public.

Now there are more than 1000 state schools, many private schools, a state university, two private universities, six teachers’ colleges, a law college, and many private post-secondary colleges and training institutes. There are now over 30,000 teachers in the state schools with over sixty percent being Omanis. Today there are libraries or LRCs in all the institutions where a formal educational program is being conducted.

This rapid development of a formal education system derives from the directives of His Majesty Sultan Qaboos, who stated that education is the most important priority of his government. As a consequence of these governmental decisions, a foundation for the Ministry’s educational policies and plans was developed in a series of successive five-year development plans, each characterised by efficient and effective planning and implementation. The fifth Five-Year Plan ran from 1996-2000 and thus has been completed. During this time, a total of 107 new schools were built.

Current LRC Staffing

LRC staffs in the Basic Education Schools, however, are inadequately prepared for the demands of the job. Some schools are staffed with teachers called “librarians,” many of whom have a two-year diploma or four-year degree in education, while others are staffed with graduates from the Sultan Qaboos University Library and Information Science program who are called “specialists.” Consequently, the former LRCs are staffed with teachers with a background in education but not in librarianship, while in the latter LRCs the staff have knowledge in librarianship but little or no knowledge about teaching. Libraries in the secondary schools are staffed with graduates of the Library Science program who have the library background but not the educational one. Thus, there are inadequately trained teacher-librarians, which results in students and teachers being unable to fully exploit the potential of the LRC and the Government’s investment being minimised. Adequately trained staff in school LRCs is critical to the ultimate educational success of our schools.

To assist in the training of successful school librarians, revising present library science courses and developing new educational courses have been proposed to the Ministry of Higher Education, and job descriptions for teacher-librarians have been written. At present, Ministry of Education personnel in the LRC and Information Technology (IT) departments are conducting training. Inspectors who are responsible for evaluating LRC staffs have also been trained in how to assess and assist LRC staff. It is hoped that eventually all teacher-librarians will be skilled enough to teach the LRC information literacy skills curriculum in addition to their role as curriculum and learning-resource managers and coordinators.

Issues Being Addressed

For teacher-librarians to be trained successfully, the following issues are being addressed:

- the need for university and college training programs in school librarianship
- the need for courses in education to be added to the required courses necessary for any graduating librarians who wish to be school librarians
- the need to allow those teacher-librarians with only a two-year diploma to upgrade to a four-year university/college diploma, which includes courses in school librarianship
- the need to offer and develop English courses for all teacher-librarians so that they can keep up with technology, including the Internet.

Solutions Begun

Several committees of educators from Sultan Qaboos University and the Ministry of Education have been formed to discuss and plan the feasibility of adding

- educational components to the library science degree so that a graduating librarian can assume the job of being a teacher-librarian,
- school librarianship courses at the six educational colleges,
- up-to-date and relevant courses in technology as essential components for students who want to be school librarians or computer teachers, and
- a joint mini-conference between the IT Department of Sultan Qaboos University and the ET Department of the Ministry of Education to be held in the fall 2003.

The Ministry of Education is continuing to develop and conducting:

- more in-service training for LRC and IT teachers and inspectors in information literacy and computer skills
- programs in English as a Foreign Language for LRC and IT teachers

In order for the Government to maximize its investment in LRCs and for students and staff to get the best educational value from LRCs, teacher-librarians must be suitably trained in school librarianship which emphasises both education and librarianship. The course of action for many of these solutions, although moving slowly, is necessary.

Current LRC Information Skills Curriculum Program, Grades 1-10

The aim in the Basic Education LRCs is to produce life-long learners who are effective users of ideas and information in all formats. The Basic Education *LRC Information Skills and Activities* curriculum programs provide continuous lessons and activities to promote information literacy and the metacognitive skills of analyzing, organizing, communicating, and applying. These four skills are integrated with the core curricular areas and so become even more essential for students. Further, classroom teachers expect students to be able to synthesise information and construct meaning to solve problems, make decisions, and communicate ideas and information in a variety of formats to meet academic and personal needs, no matter the grade level. Thus, this curricular integration enables students to make the connection between classroom learning and resources whether accessed in the classroom, LRC, or community.

The decision of what to include in the *LRC Information Skills and Activities* for each grade was determined after reading and evaluating the scope and sequence of information studies K to 12 from Alberta, Colorado (Colorado Department of Education, 1994), New Jersey (Educational Media Association of New Jersey, 1996), North Carolina (North Carolina Department of Public Instruction, 1999), Ontario (Ontario Library Association, 1999), Rhode Island (REIMA, 1999), Utah (Utah State Office of Education, 1996), and Virginia (Virginia State Department of Education, 1985). Grade level objectives were established based on what skills had been learned in the previous grades, and, therefore, which skills had to be reviewed and which new skills introduced. Competency goals were written for each literacy skill, and then activities/lessons were written for each competency goal.

As much as possible, these activities were written using materials that gave the students more information about Oman (Moore, 2002a). These LRC activities/ lessons were broken down into sections entitled:

- *Basic Information Literacy Skills*
- *Other Information Literacy Skills*
- *Assessment*
- *Notes to the LRC Teacher-Librarian*
- *Program Planning/Lesson Plan Unit*
- *Worksheets*

The section *Basic LRC Information Literacy Skills* for Grade 7, for example, includes activities on Bibliographic Format, Dewey Decimal System, Main Idea, Keywords, Graphic Organizers, Fact and Opinion, Notetaking, Outlining, Primary and Secondary Sources, and Developing Research. *Other Information Literacy Skills* for Grade 7 includes activities for Computers, Listening Skills, Organisational Skills, Reading Skills, Thinking Skills, Verbal Skills, and Writing Skills. Assessment has been stressed also and a checklist "Assessment Record" was written for the teacher-librarian to be able to complete a quick evaluation of student achievement in each of the four main skills, projects, and group work. student self-assessment worksheets are also included. *Notes to the LRC Teacher-Librarian* gives suggestions for the use of the activities/lessons or job-related information that teacher-librarians need to know such as how to review resources, setting an atmosphere in the LRC, time management or web sites for LRC teacher-librarians. *Program Planning/Lesson Plan Unit* lists lessons that can be integrated with specific subjects: biographies and autobiographies for Arabic language, the Internet as an information source for computer studies, lessons on scanning and skimming for English, the Oman Association for the Disabled for life skills, lessons on graphs for maths, and a unit on plants for science. Each *Worksheet*, listed for easy access by the teacher-librarian, is designated by subject and includes an aim. If the activity is not self-explanatory, directions for how to use the activity are included in a "Notes for the LRC teacher-librarian."

Just as child-centred learning is the foundation of Basic Education, the designed activities and lessons for the information literacy Skills were and are designed around constructivist resource-based learning. When teacher-librarians and classroom teachers encourage students in their information pursuits, they help students develop a sense of ownership of learning, develop self-confidence, and reinforce the importance of successful information gathering to achieve their information goals. Thus, a teacher-librarian using the *LRC Information Skills Program* continuum is directing students toward achieving mastery of information literacy Skills and thus helping them become life-long learners.

Grade 4 information literacy competency goals in Oman's Basic Education schools, therefore, are that students should be able to:

1. Define an information problem
2. Identify information requirements
3. Plan and choose information sources
4. Select different information sources and prioritise sources
5. Find information sources both physically and intellectually
6. Find and select information within sources
7. Focus on information from a source
8. Organize information from multiple sources
9. Present and communicate information
10. Evaluate what they have done and how they can apply their new knowledge.

Students in Grades 5-10 will continue to develop these information literacy Skills and should be able to:

1. Define and identify information that is needed
2. Identify, evaluate and select resources
3. Locate resources and access information within the resources
4. Engage in extracting the information needed
5. Organize, synthesise, and present the information
6. Evaluate the process and the product
7. Reflect on their learning and apply new knowledge when applicable.

Crucial also to an effective LRC program are policies that will enable the school's staff and students to make full use of the centre. In the section "Notes to the LRC Teachers/Specialists" are suggestions for establishing policies for fair borrowing, materials, computer use, respecting the rights of others, weeding, and book review. The LRC teacher-librarian job description sheets briefly describe what the teacher-librarian's job entails.

Difficulties Being Addressed

The *LRC Information Skills and Activities* book for each grade level is to be put on a CD-ROM and distributed to each teacher-librarian. This, however, is happening very slowly. Over the three years since these books were developed, the following is the reality:

Grades 1 and 2 are not translated into Arabic,
Grade 3 is translated but not put on CD-ROM,
Grade 4 is partially translated,
Grade 5 is translated and on CD-ROM but links need to be corrected,
Grade 6 is translated and has been in the works for production on CD-ROM for 8 months,
Grade 7 is still only in English.

Therefore, after three years of hearing about this curriculum, teacher-librarians have yet to see it. There reasons for this include inexperienced management, lack of understanding about the educational value of the LRC, lack of staff for translation and production of CD-ROMs, and a need for better intercommunication and time management skills. Difficulties abound because the LRC information literacy skills curriculum is not a part of the grading nor testing necessary for report cards; it is therefore not considered a part of the formal education curriculum. The result is that work involving LRCs seems to be relegated as a last priority after all the subject curricula.

Another difficulty lies in the fact that in the Basic Education Grades 1-4 schools, some teachers and the administration neither understand the educational purpose of a school library nor value a competent teacher-librarian. The result is that one of the two LRC librarians has to teach 30 lessons in other subjects while the other Librarian is teaching the information technology curriculum. Consequently, there is no time for any information literacy curriculum skills to be taught. Moreover, what is being taught in the LRC curricular area depends on the knowledge of library and literacy skills and the competencies of the librarian. As a result, in some schools, students might learn some information literacy skills that have been integrated within a subject, while in other schools students might not receive any information literacy skill training. LRC staffs are, for the most part, doing the best they can and working quite hard, and it is always a pleasure to see how much these librarians are trying to do and accomplish within the limitations imposed on them.

Solutions

Solutions will be possible once there is recognition that the money spent on establishing LRCs is worthwhile only when the information literacy skills curriculum program is put in place and that qualified teacher-librarians teach these skills. Then, maybe this curriculum will be translated and CD-ROMs will be made and distributed to the Teacher Librarians.

To address the problem about the imposed 30 hours of teaching in the subject areas, Fletcher Douglas, the IT Advisor, and I submitted a paper (Fletcher & Moore, 2002) that suggested the removal of six computers from the LRC and placing them either in a computer room or in a subject specialty classroom for classroom use. This would eliminate the demands placed on the LRC librarian in both the IT curriculum and subject area teaching, so that lessons in information literacy could be planned for classes who wanted to use the LRC for research and activities using the its resources.

To achieve maximum use of the LRC, the school principal should allow flexible scheduling so that subject specialty staff can take their classes into the LRC for research, reading, and other activities using the LRCs materials. This will encourage collaboration and team teaching, and subject teachers will know that the processing and use of information is

a school-wide value. Through cooperative program planning, the LRC information literacy skills curriculum program will become an integrated part of classroom content. All Omani students will improve their information literacy skills when all the LRCs have competent teacher-librarians and when the information literacy continuous curriculum of skills is available for teaching. This will also reduce the gap in information literacy between various types of Omani schools. Such information literate Omani students will have improved opportunities to participate in further education worldwide, to become life-long learners, and to become citizens of the world who can compete in the global economy.

Current LRC Information Programs, Grades 11 and 12

A part of the reform of the education system begun in 1998 is the decision of how to reorganise the structure and content of Grades 11 and 12. At the present time, although the secondary schools do contain a library and in most cases have librarians who have graduated with a library degree, these librarians are not trained as teacher-librarians who can teach students information skills. Some of these secondary libraries have few computers and also are inadequately stocked with resources for proper research by students.

In December 2002, a very successful conference on Secondary Education was held in Muscat. It generated ideas about how Oman could progress in reforming Grades 11 and 12 with the main goal of better equipping the young people in Oman with the skills and knowledge to help them succeed in the modern world (Moore, 2002b).

One of the ways to insure that students become effective knowledge and information managers is develop their information literacy skills. The *LRC Information Skills and Activities* curriculum program should, therefore, continue for students in Grades 11 and 12, since they need further work to hone their skills, especially those who will be continuing their education. The information literacy curriculum will provide competency goals for Grades 11 and 12 so that these students should be able to:

1. apply the information problem-solving process such as the “Question and the Quest: to acquire and use information for solving personal, school or work-related tasks,
2. use critical-thinking skills in information problem solving and recognise the transferability of such skills to other curricula and interest areas,
3. use effective questioning and listening skills in addition to reading, writing, and other communication skills,
4. use technology to acquire, process, store, and present information,
5. recognise and use a variety of information resources and formats.
6. identify and pursue personal learning styles,
7. read for information, enrichment, and recreation,
8. practice the ethical use of information and technologies,
9. contribute positively by participating effectively in groups to pursue and generate information,
10. begin to understand their emotional intelligence or emotional literacy,
11. effectively use goal setting and planning skills such as self-management skills and time management,
12. communicate with clarity, purpose, and understanding of audience,
13. assess, critique and refine their multiple problem solving strategies,.
14. analyze, synthesise, and draw inferences from observations and other data to define and solve problems,
15. evaluate their new knowledge and use it when applicable,
16. make explicit connections within and across areas of learning based upon an understanding of the disciplines,
17. use existing knowledge to expand understanding or develop new knowledge, and
18. construct and justify arguments using logic and evidence appropriate to the context and audience.

Difficulties Being Addressed

Because the complete reform of the content and structure of Grades 11 and 12 is several years away, students in the secondary schools will continue to be have inadequate information literacy skills. Until the *LRC Information Literacy Skills and Activities* for the previous Grades 1-10 are produced, distributed and taught, however, students reaching Grades 11 and 12 will not have a sufficient background in information literacy skills to be able to meet the demands of the LRC programs that will be written for Grades 11 and 12.

Although most of the secondary librarians have library degrees from Sultan Qaboos University, they do not have any educational courses. Thus, they do not have the specific training necessary for presenting a successful school library skills program. Consequently, graduates from these secondary schools, who continue their education at the educational colleges or the university and who may be future teachers, do not understand how to do research because they have not been taught these skills. These future teachers who may become teacher-librarians will not be able to adequately teach students in any grade how to understand and use information literacy skills.

This lack of knowledge of research skills was apparent when I was the Head Librarian at Rustaq College of Education. Here, the women students, when searching for information for a research topic, just looked through books: they did not know how to use either a table of contents or an index. The current librarians at the colleges tell me that this situation has not changed and that students still do not know how to do research. But then, how could they as their former school librarians do not adequately know how to research.

Another difficulty being addressed is the inadequate number of computers in the secondary schools. As a result, students lack sufficient computer literacy skills to perform competent searches on CD-ROMs or even, in some cases, to type word documents. Internet access is not currently available at any of the Basic Schools or secondary schools, and few students, especially those in the regions beyond the capital, have computers at home. Since students at most colleges and universities use computers not only for the online catalogue but also for doing the research required for courses, students who have not been adequately exposed to using computers for both or either of these applications will be disadvantaged in getting the maximum research information for their courses.

A further problem being addressed concerns the inadequate number of books in secondary school libraries - about 1500 copies, many of which are out-of-date. Moreover, only about 400 books and other library materials per secondary school can be purchased this year because of the quota in Omani Rial allocated for buying books and other materials like CD-ROMS.

Solutions

Once again the solutions depend upon the training and hiring of adequately prepared teacher-librarians. Recommendations have been made either to include courses in teacher-librarianship in the University's library science program or to add courses in education to the graduation requirements for those seeking teacher-librarian jobs. This will indeed help solve the problem of poorly trained teacher-librarians and thereby help Omani students in Oman develop better information literacy skills.

Recommendations to increase the inadequate number of materials and computers for the secondary schools require increased funding from the Ministry. It may be possible for the Ministry to develop pilot projects with computer companies or private businesses. Another possible approach would be for the Ministry to approach a newspaper publisher and Oman Air to provide free newspapers and magazines to these schools, even if they are day old newspapers or month old magazines which are removed from aircraft each month.

Current Materials

One of the concerns about the school libraries and LRCs is the lack of materials. When the new Basic Education schools are built, the LRCs are supplied with furniture, supplies, books and other resource materials, and electronic equipment. Thus, a considerable sum of money is spent, especially when one considers that about 65 or more schools are being built at one time. The number of books and other materials supplied to each school, however, is not sufficient, and once schools receive their first supply of materials, there may not be an annual budget to update purchases. Until two years ago, students were not able to borrow books from LRCs to take home. Now, students and staff are able to sign out books for their use, and hopefully students who borrow books will read more and perhaps even read to their younger brothers and sisters.

Because the Ministry of Education bulk buys the LRC books and other resource materials, it is imperative that teacher-librarians know the usefulness of the resources for maximum use. Therefore, an in-service training course on

how to evaluate materials for use in specific projects and activities was developed by the ET Department in the Ministry. A checklist was devised so that teacher-librarians would become more familiar with the context and usefulness of the materials in their LRCs.

Issues Being Addressed and Solutions

Recognising some of these concerns about materials, I have taken the following steps:

- Instructed the LRC staffs to start picture files and subject vertical files containing newspapers, magazines, brochures, leaflets, ads, and pamphlets for staff and teacher use. These could be supplemented by materials collected by teachers and students.
- Produced with a local publisher a magazine, *Amel and Said* (“hope” and “happy”), for students age 10 to 16. This is a first for Oman, traditionally a verbal society. It contains both educational content and student contributions such as stories, poems or letters. It is given to 1000 schools by the Ministry and is sold on the newsstand.
- Provided instructions in *LRC Information Skills and Activities* for teacher-librarians to publish books that students have written and add these to their collection, to make book display holders from metal clothes hangers, to make puppets, and to encourage students to write brochures about the community.
- Encouraged LRC teachers to add realia, such as Omani arts and crafts, to their library collection and displays.
- Included for LRC staff and other subject teachers worksheets in the *LRC Information Skills and Activities* for all grades that they can photocopy and use with other teachers or students.
- Listed websites (e.g., www.enchantedlearning.com) in *LRC Information Skills and Activities* for Grades 4 and 7 that are applicable for LRC staff, including some that allow them to copy and paste information applicable for student and staff use.
- Approached both a newspaper publisher and the chairman of Oman Air about donating newspapers and magazines to the schools. LRC staffs were also encouraged to buy a newspaper daily. The LRC staffs can then cut up the older publications for subject and picture files.
- Encouraged LRC staffs to write to the various Ministries for free materials. The Ministry of Regional Municipalities, Environment and Water Resources, for example, is an excellent source for free publications.
- Worked with the English Department and IT Advisor to create in-house materials for production of CD-ROMs, for the LRCs, that contain information to be used for projects for the English courses.

Current Site Space: LRC Design

For the most part, the design of the LRCs is good. Their location on the ground floor of all schools is within easy access of all teaching staff. Space has been well allocated for the book collection, computers, and electronic equipment. There is access for handicapped wheelchair students, although some shelving may need to be shifted. In some schools, there are computer labs within easy reach of the LRCs.

Difficulties Being Addressed and Solutions

Furniture. Some of the furniture originally purchased for the LRCs has not been durable and needs to be replaced. More money and better selection procedures with standards explicitly stated are needed.

Shelving. The shelving in the original LRCs was adequate. Metal interchangeable shelves, which are more durable and can hold more materials than the wooden ones first used, have been ordered. A shelf has been designated just for English materials.

Seating. There are seats available for about 45 students, which will accommodate a class and other students who are being sent to the LRC for independent work. It would be more ideal to have enough seats for two classes but there is not enough room for this at the present time. In some schools rugs have been allocated for two areas: a teacher-read aloud area and a students' areas for sitting on the floor to work or read. The teacher's rug area is not at the present time being used because the need to teach 30 subject classes leaves no time for the librarian to read to students.

Career Centre. As more career materials are available in Oman, shelving and a computer should be available in the secondary schools for students who are exploring their options after graduation. This area could include information on universities and colleges as well as materials on a variety of careers in the private sector. CD-ROMs on careers are available and should be accessible for students.

Electricity. Some of the schools in Oman have no electricity except through power supplied by generators, but more electric lines are added to the outlying and more remote regions.

Telephones. There are no telephone lines in some Omani schools, and again, this is being remedied as more lines are being installed in the remote areas.

Computers. There are an adequate number of computers in the Basic Education schools. A minimum of 12 computers are needed in the secondary schools: eight for Internet and CD-ROMs; two for the online catalogue, one for word processing, and one for circulation and other administration duties.

The Ministry of Higher Education has recently purchased the Horizon automation system for the six education colleges, and I have proposed that this system be purchased for all the Ministry of Education schools. In this way, a database of books and other resource materials (union catalogue) could be established for the schools in the Sultanate as well as other public libraries and private educational institutions. In a country the size of Oman, with a population of approximately 2.5 million, this union catalog would not only unify all the library/LRC collections across the country but also help create a community of learners by giving the public easy access to the information they need.

Conclusion

Students in Oman need to be information literate in order to be life-long learners and to be able to compete with students for opportunities in the worldwide information society. In order for the Government to maximize its investment in LRCs and for students and staff to get the best educational value from LRCs, progress must continue to be made in the following areas:

- the training of qualified LRC teacher-librarians
- the implementation of the Grade 1 to 12 information literacy curriculum
- the provision by school administrators of flexible scheduling so that all students, as well as classroom teachers, can use the LRC any time during the school day to satisfy their information needs
- provision of up-to-date LRC facilities with sufficient space and resources of print, nonprint, and electronic resources for teaching and learning.

When teacher-librarians in Omani schools provide all Grade 1 to 12 students with a LRC program that is truly integrated into the school's curriculum and that is central to helping these students master information literacy skills, we will have information literate students who have learned how to learn and consequently will be prepared for lifelong learning because they can find the information they need for any task or decision they need to make.

In order to close the gap between the reality of the library situation and the ideal LRC program for our schools, educators in Oman should evaluate what we have accomplished and focus on the implementation of what is most important to develop the full potential of the LRCs by acting on and carrying out as many of the solutions proposed in this paper as possible.

Bibliography

- Colorado Department of Education. (1994). *Colorado Model Information Literacy Guidelines*. Retrieved 4 April 2002 from <http://www.cde.state.co.us/cdelib/slinfoliteracy.htm>
- Douglas, F., & Moore, M. (2002). *A Report on the Proposed Redeployment of Microcomputers in First Cycle Basic Education Schools*. Muscat: Ministry of Education.
- Educational Media Association of New Jersey. (1996). *Library Media Program*.
- ECS.(1995). "Provision of Learning Resource Centres in Schools" *In Reform and Development of General Education in Oman*.
- Moore, M. (2002). LRC Information Skills: *Curriculum Framework Basic Education, Grades 1-10*. Muscat: Ministry of Education.
- Moore, M. (2002). *The Role and Importance of the LRC Information Literacy Skills Curriculum in the Cognitive Development of Secondary Students*. International Conference on the Reform of Secondary Education. Muscat, Sultanate of Oman.
- North Carolina Department of Public Instruction. (1999). *Information Skills Curriculum*. Retrieved November 11, 2001, from <http://www.ncpublicschools.org>
- Ontario Library Association. (1999). *Information Studies, K-12: Curriculum for Schools and School Library Information Centres*. Toronto: OLA.
- RIEMA. (1999). *School Library and Information Literacy Framework*.
- Utah State Office of Education. (1996). *Utah Library Media/Information Literacy: Secondary Core Curriculum for Library Media*. Retrieved March 16, 2002, from www.uen.org/cgi-bin/websql/le.../c4.hts?coreid=9&course_num=6512&p_id=110.
- Virginia State Department of Education. (1985). *Virginia Library Information Skills Curriculum*. Retrieved March 2001 from www.falcon.jmu.edu.

Biographical Note

Dr. May E. Moore, a Canadian teacher-librarian for over 25 years, is now the LRC Advisor for the Ministry of Education in the Sultanate of Oman. Her educational background includes a Bachelor of Science, a Master of Arts in English, a Master of Library Science, and an Education Doctorate in Curriculum. As the LRC Advisor, she writes the information literacy curriculum for school libraries and does professional development workshops with the teacher-librarians. She has also been the LRC Head at the Rustaq College of Education in the Sultanate of Oman. Her most recent publication and presentation was at the International Conference on the Reform of Secondary Education held in Muscat, December 2002.

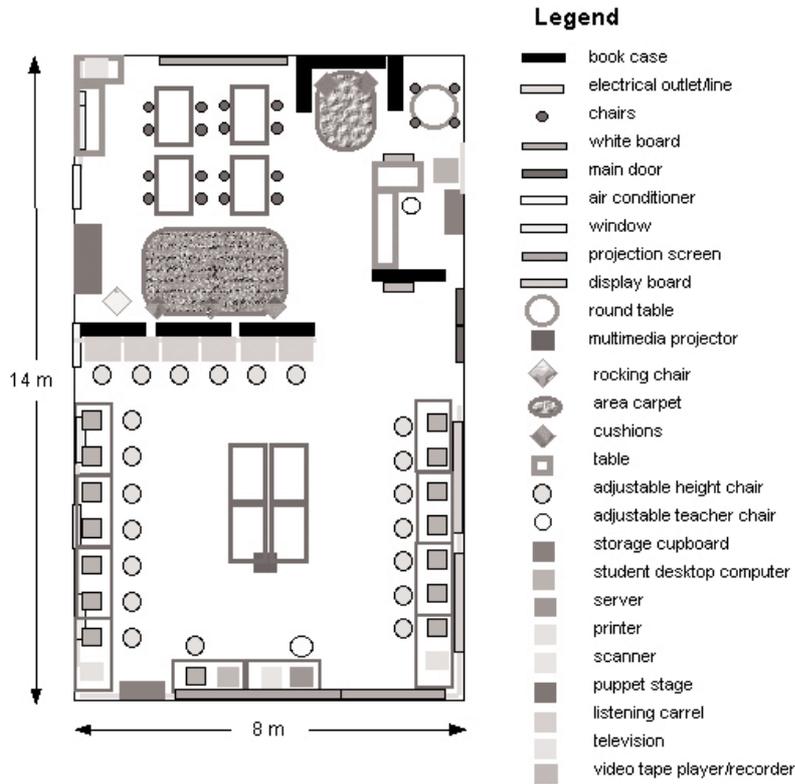


Diagram 1: Basic Education Cycle One Learning Resource Centre

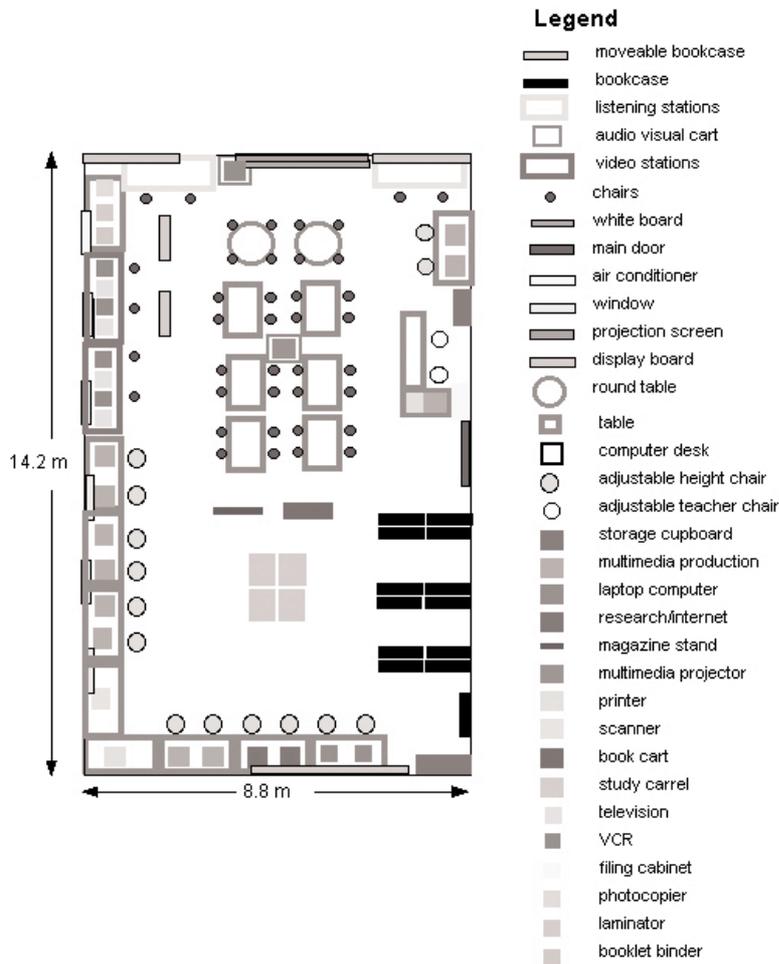


Diagram 2: Second Cycle Schools Learning Resource Centre

Stephen M. Mutula

Senior Lecturer

Department of Library & Information Studies

University of Botswana

The Internet has become increasingly an important source of information for pupils in learning, entertainment, sharing and exchanging experiences with other peers, meeting with adults and learning about other cultures. The Internet is a major force in the lives of school children and is no doubt having a tremendous influence on their reading habits and information seeking behaviour. With increased Internet connectivity however, concerns are being raised about the widening imbalances of access to ICTs between north information haves and the information have nots countries. This imbalance known as the digital divide has implications in terms of equity access to quality education in an electronic age. In Africa there are limited programmes that address in particular how schools can be equipped to benefit from the digital age and at the same time be used as an important instrument to bridge the digital divide. The concept digital divide was coined to describe the imbalance in access to information and communication technologies by different communities of people between different countries of the world. This phenomenon is today known to exist within individual countries, cities and even communities. Today schools are being seen as one of the most salient infrastructure that can be used to bridge the digital divide in our midst. This paper looks at developments in Africa aimed at bridging the digital divide through schools.

Introduction

The reality and magnitude of digital divide can be appreciated when one considers the fact that two billion people of the world's estimated population of 6 billion have never made a phone call. In addition, seventy percent of the world's poor live in rural or remote areas where access to information and communication technologies including telephone is luxury (DOT Force, 2001). In The United States, The Jupiter Communications 1997 Online Kids Report estimates that there were about 10 million children (ages 2-17) who regularly used the Internet and the World Wide Web. Of this 10 million, about 6 million logged on from home, and about 4 million used the Internet at school. Over 6 million of these children accessed the Internet at least once a week. Additionally, in 1995, there were 18 million public school students (around 40 percent) attending schools with Internet access. At the end of 1998, it was predicted that approximately 35 million students (ages 5-17) in the U.S. would have school Internet access. By the end of the year 2000, that number was expected to rise to more than 43 million, or 90 percent, of public school students (Jupiter Communications', 1997 Online). Comparatively, in Africa, though the number of children on the Web is not currently available, it is none the less quite small if not negligible going by proportion of Africa's online presence, which stands at 0.04 percent of the global presence. The digital divide is therefore real and is exacerbated by among other factors; income level, employment inequity, infrastructure development disparities, racial discrimination, social status, gender inequalities, lack of access to information, geographic location, and political influence.

Today, there is emerging consensus about the need to bridge the digital divide in order to reap the benefits that come with digital connectivity. Several governments individually or collectively around the world are striving to bridge the digital divide by attempting to propel their countries towards an information society. Such society would cater for all including children by providing them with information in many formats, and exposing them to the different technologies used for collecting, manipulating and disseminating the information (Martin, 1995). In an information society, students in remote areas would be availed opportunities to enjoy access to resources in major metropolitan areas.

Similarly, students would experience hands-on learning by sharing information and participating in projects with their peers, as well as experts, all over the country and the world.

Schools are at a vantage position for realising an information society to help children learn the digital literacy that they need to navigate in the information age by facilitating access and teaching of computer skills. In addition, school children as well as adults can gain access to shared computers and Internet resources through libraries and community centres. During 1997 in the United States of America, Tomas Rivera Policy Institute (2002) recommended three learning environments that can enhance digital literacy and help bridge digital divide namely: public schools, libraries, and community centers. It is therefore important to enable every student to gain access to instructional resources including technology and support services in order to enhance academic excellence. Students who do not have access to computers and the Internet (among other technologies) are likely to get further behind their peers who do have such access. Such deprived students would miss the instant links to information, entertainment, and communication. Such students would also potentially miss out on the 70 percent of jobs that require moderate or high amounts of computer knowledge, all of which pay well (Linn, 1999). They probably would end up in that 10 percent of low-paying jobs that do not require technical expertise.

Causes of Digital Divide

The revolution in technology especially the growth of the Internet and the World Wide Web has been documented to increase the digital divide. In fact experts do not refer to it as a divide any longer but as a digital gap because what was perceived as a divide keeps on widening. A recent report by the National Telecommunications Information Administration, NTIA (1999) of the Department of Commerce in the United States revealed that in 1997 and 1998 the disparity in Internet access at home between those at the highest and lowest education levels increased by 25 percent. Further the gap was found to have increased to 29 percent when highest and lowest income households were compared.

There are several causes of digital divide that have been documented. In the past the language factor had long been ignored in the digital equation between countries but is now being seen as a major contributory agent of the digital divide. A study by the Tomás Rivera Policy Institute (2002) in the United States established that people with lower educational levels and limited English speaking skills, lag behind their English speaking counterparts in access to computers and the Internet. It is estimated that English in computer-based communication currently stand at a high of 80 percent (Warschauer, 2001). Languages that are not Roman alphabet based, the prevalence of ASCII (American Standard Code for Information Interchange) makes computing in other alphabets or character sets inconvenient or impossible. Within sub Saharan Africa, a large proportion of indigenous people can neither read nor write in English language and as potential users of computers they get increasingly marginalized. Similarly interconnectedness occasioned by the Internet has increased globalisation and opened up local markets for competition. On a large extent privatisation is being implemented in many countries in the region and whenever state corporations get privatised, often this is followed by redundancies rendering some people jobless. Such people often are economically dis-empowered in terms of gaining access to information resources including computer and telecommunication services. In addition Sub-Saharan Africa suffers from various shortages of resources such as lack of qualified or properly trained staff and technological limitations. The lack of basic assets such as PCs, partial Internet access, inadequate telephone lines, limited economic resources, inadequacies in education exacerbate the digital gap. This situation is worsened by high cost of access, inappropriate or weak policy regimes, inefficiencies in the provision of telecommunication networks and services, and lack of locally created content (Acacia, 1997: <http://www.idrc.ca/acacia/outputs/op-eval3.htm>; [DigitalDividends, 2001](http://www.digitaldividend.org/); <http://www.digitaldividend.org/>).

In most Africa African countries, the cost of access is prohibitive. In Botswana, a country considered to have some of the lowest access charges in Africa, on average, an initial application fee of about BWP100 (about USD 20) is charged for private dial-up connection with full Internet and e-mail connectivity. Thereafter, the customer pays a monthly subscription of BWP75-100 (about USD 15-20) per month. The initial application fee for dedicated leased line is about BWP250 (USD 50), with a monthly subscription charge of about BWP1, 750(USD 350). For corporate users, the cost of connecting to the Botswana Telecommunications Corporation is BWP3, 500 (USD 700), and a monthly rental of BWP10, 000 (USD 2,000) for a 64KB data line (Eyitayo and Molefe, 1999: <http://www.balancingact-africa.com/news/back/balancing-act30.html>).

Comparatively, in Nigeria, in 1998 the cost of an international leased line was USD130, 000 and the available lines suffered slow speed. Today, most people in Nigeria largely use email because they require less sophisticated infrastructure and are cheap.

The digital divide is also promoted by lack of policies to address the needs of the disadvantaged people in society such as women, children as well as the disabled with visual impairments and hearing problems. In Kenya for example, the ratio of men to women using IT according to recent estimates stands at 70 and 30 per cent respectively. This disparity is partly attributed to perception in the country that IT is a technical subject suitable for men with many females shying away from it. Generally in Africa, women constitute large proportion of the population but their representation in universities both as students, lecturers and administrators is lower than that of men. This has resulted in shortage of women in politics, professional decision-making organs (Kariuki, and Siringi, 2001). Additionally, IT has not effectively been integrated in the development agenda of most African countries. Most governments in Africa are still reluctant to free their telecommunication services to encourage competition and facilitate rollout of the infrastructure to rural areas. Within the Africa continent, only one in every 100 Africans have access to a PC and less than 1 percent of the 750 million people has actually gone online (DPEPA, 2002). Additionally Africa suffers from lack of connectivity to the web, inferior technology, limited e-mail capacity, and limited e-government initiatives.

For a long time, Sub-Saharan Africa has continued to suffer from problem of brain drain of high calibre skills. In Botswana for example, there was an exodus of over 1000 nurses during 2001 to various parts of the world especially to Europe. This occurrence forced some aspects of health care system to be halted in the major hospital of the country. Similarly, in South Africa, a significant number of medics and other skilled personnel have been reported leaving the country in search of decent life overseas especially in Australia, New Zealand, Britain, the United States and Canada. A recent a study by the South African Medical Association showed that a quarter of all South African doctors who graduated between 1990 and 1997 were working abroad. This leaves the country of about 43 million people with about 26,000 practising doctors (Bearzi, 2001). Similarly SADC region was estimated in 2000, to have lost 10,000 teachers to Europe, Australia, Canada or the United States (IRIN, 2001).

Sub-Saharan Africa is estimated to have between 11-13 percent of the world's population, yet the region is reported to surprisingly receive a mere 1 percent of global expenditure on education. Comparatively, the developed world where 21 percent of the world's population live is estimated to receive 84 percent (Johnson, 2001). Additionally, Forty million children of school going age in Sub-Saharan Africa are estimated not to be attending school. Less than one third progress to secondary education and only 3 percent receive any form of tertiary education. In comparison the 15-17 year old in the developed world nearly all are estimated to receive secondary education and more than 50 percent tertiary education. A child in Sub-Saharan Africa has on average USD 49 spent on his education as compared to USD 4636 on average for the a child in the West in a year (Johnson, 2001).

Many countries in Sub-Saharan Africa still suffer from the problems of poor infrastructure, poor planning and mismanagement of resources, high tariffs, and limited access to ICTs in rural areas. Most of infrastructure development is concentrated in urban centres especially capital cities. Access to telephones is still very scarce - with only about 14 million fixed telephone lines installed – fewer than the number of phones in Manhattan or Tokyo. In 1995 ownership of computers was 0.31 per a hundred people (Jensen, 1999). Some countries have well developed infrastructure while others have rudimentary infrastructures. In addition, there is large disparity in telematics in Africa. For example of the 4.5 million estimated Internet users in Africa about 2.5 million are in South Africa with another 1 million taken up by Egypt. Further in 2000, African-produced content accounted for less than 0.05 percent of global Web content and today, African online services amount to about 0.04 percent of the world services. If South Africa is excluded, the web content contribution of the rest of Africa reduces to an appalling 0.02 percent (Taylor, 2002). Adam and Wood (1999) in their research on the impact of ICT in Sub-Saharan Africa established among other things under utilization of existing technology, inappropriate education, lack of awareness, lack of academically qualified managers, undeveloped legal framework for information sharing, infrastructure problems, poor connection to global network, maintenance problems, weak research and development, high taxes, over dependency on donors and poor access to credit.

Universal access to education has been elusive to many countries of Sub-Saharan Africa. In South Africa for example schooling is compulsory for ages 7-15, but while about 1.3 million enter the gates of school in grade one every year, 570,000 make it to grade 12. South Africa in addition has about 12 million learners, 8 million in primary and 4 in secondary schools. At universities 1 in 3 drop out. The other problem is lack of accessibility to school by disabled children. It is estimated that 280,000 disabled school going children in South Africa are not going to school for various reasons including lack of transport and insufficient schools which are estimated at 380 in number (Ludski, 2001). Similarly, within the universities in the region, there is low research capacity and information technology is not widely embraced. Though the rate of scientific publications has grown phenomenally in the past two decades globally, a recent ranking of the publications per capita did not include single country in Africa among the top 15. Additionally, universities are generally poorly funded and are constrained by lack of access to ICT due to various problems such as lack of tax concessions (Kariuki, and Siringi, 2001).

Africa has limited local content that is appropriate to the demands of the diverse interests. Within school curricular little content is provided that encourage learning and use of ICTs. In addition, Africa has generally a problem of insufficient reading materials and this hampers effective learning. According to (Warschauer, 2001) literacy development, the ability to read and write, is correlated to the presence of books in children's homes and to the presence of readers in their lives. The problem of undeveloped children book infrastructure is exacerbated by the fact that though the Internet has increasingly become a source of children information resource, it is not widely used in schools in Africa. A look at the Web reveals great amount of children literature, but by and large this has focus on American and European audience. Yahoo Search engine for example offers a great Children's Authors page with links to pages about the authors of children's books. Similarly, the International Association of School Librarianship, IASL (2002: <http://www.iasl-slo.org/chlitres.html>) maintains lists of several children resources on the Net giving their URLs. However, these resources are largely produced in the United States and Europe and have orientation to serve these regions.

These problems that exacerbate digital divide in the wider society are reflected in schools in various manifestations such as lack of computers in the classroom, lack of Internet access; insufficient or lack of training for teachers, limited bandwidth, misalignment of technologies with the curriculum, and inappropriate software that meet student needs. (Trotter, 1999).

Bridging the digital divide in Africa: Current developments

Worldwide, there are various initiatives at national, regional and international levels aimed at addressing the digital divide phenomena. In Botswana for example the national development strategy known as Vision 2016 is the blue print for propelling the country towards an information society by 2016. It has several themes among them 'educated and informed nation'. The sub theme espouses the following principles that by the year 2016, Botswana will have entered an information age on equal footing with other nations; sought and acquired the best available information technology; become a regional leader in the production and dissemination of information; and developed its own capacity particularly in the electronic media, radio and television. In addition, all schools will have access to computer and computer-based communications such as Internet (Presidential Task Group, 1997).

Further, the government of Botswana is involved in equipping all Community Junior Secondary and Senior Secondary Schools with computers (Republic of Botswana, 2002). UNICEF on the other hand is in the process of establishing information resource centres in schools across the country and equipping them with computers. Similarly, Botswana Technology Centre (BOTEK) is carrying out a pilot project at three centres [Gumare-Northwest district, Hukunsi-Kgalagadi district and Letlhakeng-Kweneng district] for the establishment of community user information system to enable rural communicate gain access to ICTs services (BOTEK, 2001). The Ministry of Education on the other hand through the Revised National Policy on Education of 1994 is to establish school libraries and resource centres in all primary schools in Botswana. The policy also addresses the promulgation of a National Information and Information Communication Policy, which are essential for the development of information sector. The Carnegie Corporation of New York is involved in funding the revitalisation of public library system in Botswana and other countries such as Kenya, South Africa and Tanzania. The program among other things aims at improving the provision of networked library and information service, improve information and communication technologies, market and promote library services in order to ensure optimum use by increasing public awareness; supporting the infrastructure and physical developments (Priestley, 2001).

In South Africa, the government is involved in establishing multipurpose community centres across the country as part of its e-government strategy. The government has completed a pilot project to install Public Internet Terminals (PITs) in most post offices across the country's nine provinces to help people to gain access to government services online. The initiative launched in 1998 has PITs with multimedia capability to allow communities to access the Internet, email services and government information through desktop kiosks (Ngobeni Wa, 2001). The centres are expected to offer integrated delivery of services to community within their areas of residence. These centres will provide government services, public telephones, Internet, email and photocopying, as well as act as learning resource centres. Similarly, Translate.org.za an NGO is making great efforts to translate computer applications in local language to overcome language barrier in using computers. So far the computer applications covering the full desktop, web browser, word processor, spreadsheet and email have been translated into a number local languages (Martindale, 2001). This initiative aims at encouraging people who have no English literacy to use computers. Plans are underway to have all the 11 official languages of South Africa translated into the computer experience (Martindale, 2001). On the other hand, Linuxlab.org.za another South African NGO has initiated some plan to provide disadvantaged schools with refurbished computers and freely available software (Martindale, 2001).

Telkom South Africa with partners successfully rolled out an undersea fiber optic cable, which links the country with Malaysia. The Malaysia link covers 15000 Km of submarine cable through West Africa, another 13800km South Africa far east-Malaysia cable, through Reunion and Mauritius including India. The whole length of the cable will accommodate 4.8 million telephone communications at the same time and 8000 digital TV transmission. The cable became operational in May 2002. Telkom has also increased connectivity to all 14 SADC member countries and other parts of Africa and the world. South Africa has become a conduit for telephone traffic within Africa and with the outside world. The consequence is that the volume of telephone calls from South Africa to the whole continent has increased recently by an estimated 240 percent whereas calls from the continent to South Africa have increased by more than 1000 percent (Matlou, 2001).

Within the Southern African Development Community, SADC region, the member countries have enacted an IT protocol on goals and principles for information society which outlines what individual countries can do to attain information society within the region. The SADC IT protocol identifies the following goals for developing an information society in Southern Africa, namely; improving and broadening equitable access to information and communications technology; reducing costs related to IT; developing SADC wide infrastructure; encouraging the growth of software and hardware facilities in SADC; and improving human resource capacity (SADC Secretariat, 1998).

On the other hand the Africa Information Society Initiative (AISII) is the framework for achieving an information society for the countries of Africa. The AISII action framework calls for: implementation of national information and communication infrastructure; building institutional frameworks- human, information and technological resources in all African countries; pursuit of priority strategies, programmes and projects for the sustainable information society in African countries (Amoako, 1996). Similarly, the New Economic Partnership for Africa, NEPAD among other things aims at enhancing security, improving infrastructure, democracy and eradicating poverty in order to place the African countries individually and collectively on a path of sustainable growth and development.

Globally, the Digital Opportunity Task Force (DOT FORCE) of G8 and the forthcoming World Summit on Information Society (WSIS) during 2003 in Geneva, Switzerland and 2005 in Tunis, Tunisia respectively are important instruments for defining the way forward toward an information society. The WSIS aims at promoting services and applications for economic, social and cultural development. In the area of education, WSIS sees ICT as tool to leverage education change for enhancing teacher-student environment and providing opportunity for access to education by employed workers. (ITWeb, 2002: <http://allafrica.com/stories/200201100296.html>; United Nations, 2002: <http://www.itu.int/wsis/basic/basic01.htm>).

Several countries in Sub-Saharan Africa are liberalising and privatising their telecommunications systems and effectively reducing tariffs. South Africa, Botswana, Kenya, Malawi, Nigeria, Angola, Mozambique and Zambia are some of the countries that are undertaking privatisation process or have plans underway. Consequently, sub-Saharan Africa has now achieved a teledensity of 1 percent considered as the basic minimum for economic development. Additionally, the African economy has had an upswing and is starting to show signs of positive recovery. This development is enhancing

the uptake of ICTs in the countries involved. For example in 1995 it was reported for the first time that Africa's economic growth was 3.4 percent and reached 5 percent in 1996 with almost 60 percent of countries in Sub-Saharan reporting positive per capital increases (Global Communications, 1998).

The Leland Initiative is encouraging Internet connectivity in a number of African countries. The Initiative is a five-year, USD15 million project designed to extend full Internet connectivity to up to 20 African countries. Some of the countries in this initiative include Botswana, Namibia, South Africa, Kenya, Tanzania, Zambia and Zimbabwe. The initiative aims to facilitate and encourage Internet use by Africans to achieve sustainable development and create an enabling environment in the project countries to facilitate electronic networking and access to global information infrastructure (USAID, 2001: <http://www.usaid.gov/regions/afr/leland/index.html>).

Developments through Schools in Bridging Digital Divide in Africa

There are a number of initiatives of bridging the digital divide through schools that are being implemented on the African continent. In Kenya UUNET Multinational Service Provider is planning to provide free cyber cafe services to selected rural based colleges and secondary schools as a social responsibility if the government licenses use of VSAT. This would help students to carry out research through Internet besides giving them an opportunity to easily communicate with the rest of the world. Further, 73 schools in Western, Nyanza, Coast and Central provinces of Kenya have started using computers as teaching and learning aids in an innovative project supported by the British Council, UK's Central Bureau and the UK-based Global Action Plan. Partner schools in the UK have donated computers and also built classrooms, dormitories, science rooms, etc. The schools have acquired thousands of textbooks and sports and laboratory equipment. The initiative is expected to break the barriers inhibiting global integration and enable the schools to join the information superhighways. The partnerships are also operational in South Africa and Nigeria (Wekesa, 2001).

In Uganda and Zimbabwe, IDRC/ITU and UNESCO through World Links are supporting the establishment of School-based Telecenter (SBT) to serve as multi-purpose community centres for rolling out Internet connectivity to the rural areas. The broad mission of the MCTs is to study the efficacy of use of ICTs to promote rural community development. The cost of the services is shared among the schools with each paying USD200 per month. World Links is contributing the other USD 200 per month per site for a two-year period. The schools raise funds from charging students tuition fees and other community user fees. On average, each student pays USD18 per year. A typical secondary school has between 800 and 1000 students around the year. The MCTs have been quite successful in bringing communication facilities closer to remote and nomadic communities in Uganda. The model also ensures sustainability of the service. Similarly the World Bank has been involved in training teachers in 261 Africa schools in using Internet (Mayanja, 2001).

ITU is involved in a number of projects to bridge the divide- infrastructure supply and financing, local capacity building, and private-public sector development partnerships. ITU is developing training centres in some countries in Sub-Saharan Africa and in other developing countries to provide students and telecom/IT professionals with access to affordable and relevant training in mentored e-learning environment. In addition, ITU has launched youth forum to enable exceptionally talented university students from all ITU member states to access ICT sector. Such students will be connected to ITU networks and form relationships with ITU member states. About 104 students will benefit from Africa (Utsumi, 2001).

In South Africa's Eastern Cape Province, Nokia has put up at Nongeke Senior Secondary School in rural Bizana electricity generator, water catchment system, classrooms, workshop, library and computer room as part of their social responsibility to the community (Bongani, 2001). Similarly in South Africa, the Digital Partnership - a union of large companies that regularly update their stock of desktop computers with software makers, networking companies and aid agencies is readying the machines for use in schools, village telecentres and prisons. Through this project, computers will be used to help children in the country to become computer literate. Through this project the first few thousand computers have already been installed in schools in the country. During 2003, the project hopes to transfer 170,000 computers to about 4,000 government schools in the country. A network of workshops is being set up in South Africa to refurbish the donated computers and locals are being trained to do the work. In addition, telecentres full of computers are being set up in the schools and teachers are being trained in the ways to use the machines in lessons (Ward, 2002). Similarly, in Dikhatole, a township just east of Johannesburg, a non-profit Organisation for Rehabilitation and Training

(ORT) has set about equipping members of the community with basic computer, internet and business skills. ORT in partnership with the South African branches of Hewlett-Packard (HP), Microsoft and Macsteel are to create a learning centre, a place where the digital divide could be bridged and people could be equipped to compete in a fast changing world. Dikhatole Digital Village the result of this partnership is the largest facility of its kind in the country with more than 90 Internet enabled workstations. HP donated the computers and hardware needed to network the computers and connect to the Internet, while Microsoft sponsored the software. The building, which houses the training centre, was loaned to the project by Macsteel, who renovated it and provide on-going infrastructure support. Through the project, teachers in the area will be trained to deliver ICT lessons to their primary and secondary school pupils. Computers will be donated to schools in the area for this purpose. It is envisaged that the project will last three years, and by then the community is expected to be trained and experienced enough to make the centre self-sufficient. Community members will be trained in basic Internet use for networking and support, and in starting up and managing a small business, operating systems, Windows, MS Word, MS Excel, MS PowerPoint, and Outlook Express.

South Africa government in partnership with private sector has set up 28 digital villages for community use. Digital villages are computer resource centres managed by members of the community who are trained in the necessary IT and management skills. One such digital village is in Alexandra, a low-income suburb in Johannesburg. The village is funded by Microsoft South Africa in partnership with Hewlett-Packard South Africa and the Ministry of Local government. Microsoft and HP contributed towards infrastructure development by linking 20 HP workstations, 2 HP servers and 2 HP printers on local area network and enabling Internet connectivity. (Microsoft Corporation, 2002, <http://www.microsoft.com/southafrica/press/press-501.htm>).

In Namibia the government has invested in ICT to promote digital literacy in Schools. through SchoolNet project. Schoolnet was established in February 2000, and the organisation has begun bridging the digital divide by introducing computer technology and Internet access to schools with the help of a number of local and international stakeholders. Communities that do not have money and to afford computers are being helped by SchoolNet through collecting redundant computer equipment from the public and private sector, locally and internationally, and serves as an outsourcing agency to disadvantaged schools in the country. So far SchoolNet has provided computer equipment and/or Internet access to over 120 mostly rural disadvantaged schools and thousands of children have now become Internet savvy. SchoolNet has set itself the target of connecting every school in Namibia to the Internet by the end of 2005 (Jensen, 2001).

Microsoft is planning to follow the example of Linux and offer free computer software in schools in South Africa and elsewhere to enhance digital literacy and assist bridge the digital divide. Through this program free alternatives to proprietary software will be given away to schools across the developing world. This will help poorer countries to gain access to free software because they are unable or unwilling to pay for licences to use. Similarly, Sun Microsystems has donated more than USD 6 billion worth of its StarOffice software to schools in Asia and Latin America. Sun's giveaway is being expanded to include South Africa and some parts of Europe.

Telisa, (the Technology Enhanced Learning Initiative of Southern Africa) conceived by the Centre for Lifelong Learning in cooperation with several partners such as World Bank and UN Economic Commission for Africa is aimed at facilitating the establishment of ICTs centres throughout SADC region and a series of information servers to provide appropriate support material to existing institutions, lecturers, teachers and businesses. Telisa concept has five major areas of action namely: Internet connectivity, information clearing house, institutional connectivity, educator training, and projects. One such centre is established by the Kgautswane community in Mpumalanga province of South Africa that was set up with the assistance of Old Mutual companies and Safmarine. The centres provide payphones, photocopying, document lamination, scanning of documents, Internet access, community information and access to computers (West, 2000, http://www.pgw.org/telisa/Concept_Document/concept_document_9807.htm).

Benefits of Bridging Digital Divide in Schools

Bridging the digital divide has a number of important benefits. According to (Teaching the News, 2002, January 11, bridging the digital divide), it so important to recognize and address the digital divide in order to promote social justice so that every man or woman, no matter his or her race, age, background, religion, ability or disability, should have the same opportunities. Those that have the technology - both physical access to it and the exposure and training to know how to use it — can use the technology to make more money, buy more or better technology, etc. Over 60 percent of today's jobs require technology skills. Lack of access to the tools of today's workplaces leads those without the technology to be stuck in place, to never be able to make enough money to afford the technology and training that would make employment in areas requiring the use of technology even possible. Additionally, web-based portals are being set up that will host up to date textbooks and educational material that should help schools save money and pay for the maintenance of the machines

There are vast array of services that one can currently find online. These services are constantly growing, some of which are of general nature while others are specialised for pupils. Reference information on the Web that pupils can find of use includes news, weather, sports, movies, encyclopaedias, cartoons, games, etc. Pupils that are accessible to the Web are increasingly able to communicate through electronic mail (E-mail) with family and friends around the world. Other pupils use the public message board chat areas to make new friends who share common interests. It is possible for pupils to use the Internet to watch video and listen to audio programs. As an educational and entertainment tool pupils can learn about virtually any topic, visit a museum, or play an endless number of computer games with other users or against the computer itself. Additionally, pupils can use the Internet in a number of ways: through electronic mail, they can exchange messages very rapidly with people anywhere in the world. Usenet groups, or newsgroups, which are electronic bulletin boards, can assist keep in touch with people who share an interest in a particular subject. Pupils with Internet access can now use chat with other people, in chat rooms, normally by typing messages that are sent, received and viewed more or less simultaneously. By linking a microphone to a PC it is also possible to use the Internet to make telephone calls or speak to other people who are also online.

Web cams (special cameras that work with computers) are becoming cheaper and easier to acquire and use. Using web cams, people can even see each other over the Internet and conduct conversations. Live video-conferencing as well as TV and radio broadcasts from stations all over the world are also becoming more and more accessible to people as the Internet capacity grows and telephone call charges continue to fall. It can be a way of picking up or exchanging information or files, helping with homework or the pupils school projects. The Internet is a medium, which adults and children can share to their mutual advantage. It is already being widely used in schools and across the educational system to enable pupils do their homework, but also for all kinds of fun and games and to communicate with their friends. Most young people seem to have had no difficulty adapting to the Internet.

Basic and advanced telecommunications technologies - including the telephone, computer networks, and the Internet- when used appropriately, enable school children to conduct research, improve their performance in core competencies, and hone their computer literacy.

Challenges and issues of Bridging Digital Divide through Schools

As efforts continue to be made to integrate technology into schools a umber issues need to be addressed. Today in Africa as the Internet becomes more pervasive, many school going pupils are increasingly getting online either at home or elsewhere. The Internet holds tremendous promise for the schools but also raises difficult issues, which need to be urgently addressed. Pupils in schools and children in general are known to visits sites that may not be acceptable to parents. Who should be well placed to determine the resources on the Net that children should gain access to (parents, teachers, or publishers)? Censorship goes counter the right of access to information, which is enshrined, in many international conventions and charters, but are children able to make well-informed judgement about useful sites that they can visit? Parents have an important inalienable role to mould their children and therefore have great say in the type of information resources that they should have access to. But in Africa where the great proportion of the population is computer illiterate how can this parental role be fulfilled? How do we determine children Internet resources that are acceptable and suitable in particular learning setting? How easy is it in an African environment with complex cultural

diversity to determine suitable learning resources for the children? How do we ensure that we do not censor what in actual fact is important learning experiences for the youth?

The Internet is a huge technological achievement promising great benefits to society in general and to children and young people in particular, especially in the fields of education and entertainment. However, as with many new or emerging technologies, the Internet has brought a number of unfamiliar problems in its wake. Parents and carers therefore first need to know about the possible hazards to children and young people on the Internet and, in turn, they need to know how to deal with them. Going online is a travelling experience for anybody including children and often one meets a wide array of people. Most of the people on the Internet are decent and respectful, but some may be rude and insulting. Children get a lot of benefit from being online, but they can also be targets of crime and exploitation in this as in any other environment. Children need both parental and their teachers supervision and advice on how to be sure that their experiences in cyberspace are happy, healthy, and productive. Although there have been some highly publicized cases of abuse involving the Internet and online services in Europe and the United States, reported cases in Africa are relatively infrequent. It is possible that the low use of Internet in Africa is the reason for this but it is also possible that like most crimes against children, many cases go unreported, especially if the child is engaged in an activity that he or she does not want to discuss with a parent or the teachers. The fact that crimes are being committed online, however, is not a reason to avoid using these services. A better strategy would be to instruct children about both the benefits and dangers of cyberspace and for them to learn how to be wise in order to better safeguard themselves in any potentially dangerous situation.

ISPs and online services generally do everything they can to provide their subscribers with an enjoyable, safe, and rewarding online experience, but it's not possible for these companies to police everyone who uses their service. Besides, once you're connected to the Internet, you're able to exchange information with people who are signed on with other ISPs and online services. The Internet is not governed by any company or government. Anyone anywhere can publish material on the Internet. An ISP links you to these sites, but cannot control what is on them. It's up to individuals to make sure that they behave in a way that's safe and appropriate.

There are some risks for children who use the Internet or online services. Teenagers are particularly at risk especially when they often use the computer unsupervised and because they are more likely to participate in online discussions regarding companionship, relationships, or sexual activity. Some sites provide information about Teen Safety on the Web (National Centre for Missing and Exploited Children, 1994: www.missingkids.com). Children also face the risks of exposure to inappropriate material that are sexual, hateful, or violent in nature, or those that encourages activities that are dangerous or illegal. Children may fall prey to security through being lured to some encounters that could risk their safety. In a few cases, paedophiles have used E-mail, bulletin boards, and chat areas to gain a child's confidence and then arrange face-to-face meeting. It is possible through the Web for the child to encounter E-mail or chat/bulletin board messages that are harassing, demeaning, or abusive. Children have been known for example to give out a parent's credit card number or doing something that violates another person's rights.

The Way Forward

It is important for schools to promulgate acceptable use policies that detail what children can and cannot do on the computer. The child and the parent must sign this acceptable use policy. Additionally, schools should put in place filtering software that prohibits school children from visiting sites that are deemed unacceptable to them. A Microsoft study in the United States showed that increased time on the web by school children was related to improved grades in examinations.

One of the issues relating to use of schools in bridging the digital divide is the problem of sustainability. To help pay for the upkeep of the computers, schools can be encouraged to open up their computer rooms to local communities and charge for courses in technology skills, for printing out documents or hosting e-mail accounts on their behalf. It is important that governments get involved to provide financial help or pass laws that can guarantee cut price net access for schools.

Local communities must be involved in making decisions regarding technology deployment and use in order to create conducive environment and mobilise the consensus of all. Multiple technologies should be allowed to compete so that the most cost effective can be chosen. It is important for research initiatives that aim at developing and adapting foreign and new technologies to local situations. Additionally, efforts must deliberately be made to enhance the training of teachers in ICTs and also promote Internet awareness among the youth in schools. Efforts should be made towards e-governance to help achieve a critical mass of online content and offer free access to such content.

VSAT technology could be used extensively for the transfer of signals (data and voice) using small satellite dishes, which are ideal for arid and semi-arid areas where phone lines are non-existent or would be too expensive to put up and maintain. Investing in wireless networks would help overcome terrestrial distances. Content creation should involve multimedia and multilingual instructional materials that cater for all shades of interests. The provision of local content should address alternatives to people with impairments. Local content development should be interdisciplinary and its development should be achieved through a number of ways that include involving local elders, digitalisation of information and images, translation, editing, and production. The materials developed can be used to produce or make radio programs.

Governments should encourage social responsibility obligations to be extended to schools to create cyber culture among the youth. Teachers should be provided with training and also be involved in software selection process. It is also important to provide adequate technical support so that the teachers can be equipped to provide equipment troubleshooting and minor repairs, software installations, and other operations that require only moderate amounts of technical knowledge. These teachers could then help their peers, reserving calls to coordinators for more serious cases. The technology should be integrated into instruction, and teachers should be encouraged to engage in tele-collaborative projects via e-mail, the web, and video conferencing. Schools should be encouraged to periodically assess their ICT programs regarding infrastructure, student usage of technology, and the provision of training and technical support to teachers. The evaluation should centre around infrastructure in relation to where hardware and other equipment can be located, and where Internet access can be provided - libraries, labs or classrooms? Student usage should also be evaluated along the lines of which students have access to technology? Does it vary for example by race, ethnicity, gender or income level? Do students in special programs have equal access? Which kinds of student activities predominate? Evaluation should also look at technical support and questions such as: who provides technical support? How long do teachers usually wait for it? Are they allowed or encouraged to do some things for themselves? Decision should be made among teachers about who should be trained- those already knowledgeable about technology or those new to it?

Governments should be lobbied to waive duty and other taxes on computer software and hardware to make them more affordable and accessible to the schools. Additionally governments could offer rebates and subsidies to educational institutions to acquire ICTs and they could also explore ways of providing telecommunication services in the rural areas and under-served areas through issuing of small medium and micro-enterprises licenses. With increasing initiatives to enhance connectivity in Africa, it is possible that more and more schools will come on board to implement ICTs in their curriculum. It is important that governments should provide conducive environment for this process to bear fruits while the private sector should facilitate the adoption of best practices in the industry to promote wide adoption and use of ICTs. Relevant policies, institution frameworks and enabling and sustainable models need to be adopted to make progress towards bridging digital divide through school achievable.

References

- Acacia .(1997). Use of Information and Communication Technologies in IDRC Projects: Lessons Learned. Retrieved March 27, 2003, from (<http://www.idrc.ca/acacia/outputs/op-eval3.htm>)
- Adam, Lishan and Wood, Frances .(1999). An investigation of the impact of Information and Communications Technologies in Sub-Saharan Africa. *Journal of Information Science* 25(4), 307-318
- Amoako, K.Y .(1996). Empowering Communities in the Information Society, a keynote address. Heldenfontein Estates, South Africa, 15 May, 1996. Retrieved May 20, 2003 from http://www.uneca.org/eca_resources/Speeches/amoako/96_97/empower2.htm
- Bearzi, June .(2001). Alarming gap as medics quit South Africa. *The Star*, August 2, 1.
- Bongani, Majola.(2001). Nokia Madiba join forces in E Cape. *Mail & Guardian*. October, 12, 46.
- BOTEC .(2001). The need for an ICT policy for Botswana and its benefits. *Position paper*. Gaborone: BOTEC, 121.
- DigitalDividends .(2001). Digital Dividends Web Page on background to digital divide. Retrieved March 27, 2003, from <http://www.digitaldividend.org>
- DOT Force .(2001). Digital Opportunities for all: meeting the challenge. *Report of the Digital Opportunity Task Force including the Genoa Plan of Action*. Retrieved July 31, 2002, from http://www.dotforce.org/reports/DOT_Force_Report_V_5.0h.html
- DPEPA .(2002). Benchmarking E-government: A Global Perspective. N. York: United Nations.
- Eyitayo, Adekunle.O. and Molefe, Chedza .(1999). Botswana: Rapid Internet Growth Over Last Four Years. *Balancing Act*, (30). Retrieved March 27, 2003, from <http://www.balancingact-africa.com/news/back/balancing-act30.html>
- Global Communications Africa.(1998). Encouraging Investment in Tanzania. London: Hanson Cooke, 416-418
- IASL.(2002). Children's Literature Resources on the Internet. *School Libraries Online*. Retrieved May 20, 2003, from <http://www.iasl-slo.org/chlitres.html>
- IRIN .(2001). New initiative to tackle regional brain drain. Mmegi. August 3, 19.
- ITWeb .(2002). UN adopts resolution on World Summit on Information Society. Retrieved November 20, 2002, from <http://allafrica.com/stories/200201100296.html>
- Jensen, Frauke .(2001). Bridging the Digital Divide in Namibia. BBC's African Service Reporter. November 18.
- Johnson, D .(2001). Lessons from Africa. *Mail & Guardian*. September 21, 7.
- The Jupiter Communication .(1997). Kids Report. Retrieved March 27, 2003, from <http://www.kidsbank.com>
- Kariuki Waruingi and Siringi Samwel .(2001). Hard times for varsities. *The Daily Nation*. February 12, 17.
- Linn, Elizabeth .(1999). Tomorrow's Jobs: How High-Tech Are They?" Equity Coalition. Michigan: University of Michigan School of Education.
- Ludski, Henry .(2001). SA schools set pupils up for hard knocks. *Sunday Times Business Times*. August 26, 25.
- Martin, William J .(1995). The global information society. Aldershot: Aslib Gower.

- Martindale, Linda .(2001). Bridging the language divide. *Mail & Guardian*. September, p.42.
- Matlou, Jubie .(2001). African connection. *Mail & Guardian*. September 28, p.2.
- Mayanja, Meddie .(2001). School-Based Telecentres – Uganda, The Communication Initiative site September 27 ,2002, Retrieved May 21, 2003 from <http://www.comminit.com/pdskdv92002/sld6249.html>.
- Microsoft Corporation. (2002). Digital Village in Alexandra. Retrieved November 13, 2002 from <http://www.microsoft.com/southafrica/press/press-501.htm>
- Microsoft Corporation. (2002). Digital Village in Alexandra. Retrieved November 13, 2002 from <http://www.microsoft.com/southafrica/press/press-501.htm>
- National Centre for Missing and Exploited Children .(1994). International Centre for Missing and Exploited Children. Retrieved March 27, 2003, from www.missingkids.com.
- National Telecommunications Information Administration, NTIA .(1999). Falling through the Net: Defining the Digital Divide. Washington, D.C. NTIA . Retrieved March 26, 2003, from <http://www.ntia.doc.gov/ntiahome/digitaldivide>.
- Ngobeni, Evidence Wa Ka .(2001). Government services available online. *Mail & Guardian*, August 24, 39.
- Presidential Task Group .(1997). Long-term vision for Botswana: towards prosperity for all. Gaborone: Government Printer
- Priestley, Carol .(2001). Revitalising public libraries in Africa: Kenya and Botswana update. INASP Newsletter. June, 6.
- Republic of Botswana. (2002). Introducing the new Ministry of Communications, Science and Technology. Mmegi, November 22, 54.
- SADC Secretariat .(1998). SADC in the next millennium: the opportunities and challenges of information technology. Gaborone: SADC Secretariat.
- Taylor, Nick. (2002). Content in context. *The highway Daily*, August 21, 1-4.
- Tomas Rivera Policy Institute. (2002). information technology. TRPI. Retrieved March 26, 2003, from http://www.trpi.org/information_tech.html
- Trotter, Andrew. (1999). Preparing Teachers for the Digital Age. *Education Week*. September 23. Retrieved March 15, 2003, from <http://www.edweek.org/sreports/tc99/articles/teach.htm>.
- USAID .(2001). USAID Leland Initiative: Africa Global Information Infrastructure Project, Retrieved March 17, 2003, from <http://www.usaid.gov/regions/afr/leland/index.html>.
- Utsumi, Yoshio. (2001). Catching up with the digital revolution in Sub-Saharan Africa, *Today* 7(11), November, 29.
- Ward, Mark. (2002). South African Pupils Get Hi-tech Boost. *BBC News Online technology*, December 16.
- Warschauer, Mark, J. (2001). Language, Identity and the Internet. In B. Kolko , L. Nakamura and G. Rodman (Eds.), *Race in Cyberspace*. New York: Routledge. Retrieved March 26, 2003, from <http://www.lll.hawaii.edu/web/faculty/markw/lang.html>.
- Wekesa, Bob. (2001). 73 schools benefit from British Council Project. *The East African Standard*, May 26

West, Paul. (2002). The Telisa Concept Document. Retrieved November 13, 2002, from http://www.pgw.org/telisa/Concept_Document/concept_document_9807.htm

United Nations. (2002). The World Summit on the Information Society. Retrieved November 22, 2002 from <http://www.itu.int/wsis/basic/basic01.htm>

Biographical Note

Mr. Stephen Mutula is Senior Lecturer in the Department of Library and Information Studies, University of Botswana. He holds a Masters Degree in Librarianship, Bachelor of Education Degree and Postgraduate Diploma in Computer Science. He is studying for a doctoral degree at Rand Afrikaans University, South Africa. His research interests are: Web based information systems, cellular communications, mental models of the Web, E-learning systems, and Virtual reality systems. He has published over twenty articles in refereed journals/books. He won in 2001 the Literati award for best article published in the Bottomline and another award from SCECSAL in 2000 for best presentation.

Mutulasm@mopipi.ub.bw

Marie O'Brien
 Teacher-Librarian
 Eltham College of Education,
 Australia

Eltham College is a multi-campus, K-12 Australian school. It has close associations worldwide, principally, in China. Eltham's Knowledge Network forms the basis of all communications within the College community, including its overseas interests. Knowledge Network contains the Student Learning Management System[SLMS] jointly developed by Eltham and Corskills Australia. SLMS is a total package that includes students' work and resources online, subject information, reporting, and direct teacher/student and teacher/parent contact information. The Senior teacher-librarian has developed an interactive online Information Literacy Skills course for Grades five and six students that links to SLMS.

Introduction

What and Where is Eltham College of Education?

Eltham is a school of about 1500 students from Early Learning - three years old (ELC) to Year 12 (17 to 19 years old). It is situated in a bush setting 25 km north-east of the Melbourne Central Business District in Research, overlooking the city. It takes its name from the former Shire of Eltham, now known as Nillumbik, meaning "shallow earth," in recognition of the Wurundjeri, the original Aboriginal inhabitants. There is a Year 9 campus in the Melbourne Central Business District, a Year 9 program at the Research campus that is expected to move off-site in the near future, a separate Food Technologies campus adjacent to but a considerable distance from the main Research campus, which encompasses a winery, and a pre-school child-care facility in nearby Eltham North. The College has long-established links with sister schools Lu He in Beijing and Yun He in Shanghai, while many of our international students come from Dalian in China. We also have regular student exchanges with Lycee Joffre, in Montpellier, France and Satya Wacana Christian High School in Salatiga, on the Indonesian island of Java.

Eltham is continuing to expand its presence around the world by establishing separate campuses such as Beijing Century Peace Culture and Education Exchange Centre, known as CPCE, in China, which is jointly owned by Eltham College of Education and Maggie Lin, a Chinese national. Students learn English online using a tailor-made package that has been designed and published by the College staff in Research. At the time of writing this paper, Eltham's principal Dr. David Warner, was preparing to sign a similar agreement between Eltham and Cao Yang Number Two High School in Shanghai. Eltham's Library has a presence at all of these locations due to its active participation in the online environment.

"Eltham releases and enhances the talents of the individual. In a safe and caring environment we create a desire for lifelong learning and build pathways to success." This is Eltham's mission statement and it underpins everything we do at the school. This year we are celebrating our 30th year as a fully independent, community-based school. During its brief history, Eltham has always been at the forefront of educational innovation and change. Today we uphold that tradition by continuing to expand and enhance our Knowledge Network, the College's yellow brick road and one of our master keys to the students' future success.

Our school charter recognizes that the world is a rapidly changing place. It states that our responsibility is to teach for the strengths that will enable young people today to learn, live, work and play successfully and with confidence in a global environment of massive change, an environment that is dominated by knowledge and the easy transfer of information.

The pace of change has never been greater than at the present and it seems to us now, that we as educators will never catch up. As a profession though, collectively we do very well. We can't teach our students everything, because as individuals, our knowledge is limited, but we can facilitate the learning that takes place by equipping students with the tools they need to help make each of them a success in their own right.

Australia is now a homogenous and multi-cultural society that is no longer dominated by Anglo-Saxon traditions as it was less than 50 years ago. Our families come from every corner of the world and live side by side in tolerance and harmony. Our culture, particularly in the cities, has become greatly enriched by the influences that immigration brings with it. Eltham 's student and teacher populations reflect this situation.

Many of our students were not born in Australia or are first-generation Australian, and we have a significant number in the Senior school (15 to 18years old) who come to us as International Students, mostly from Asia but also from as far as Finland and South America. A significant proportion of our teaching staff was also not born in Australia. Some are not even Australian citizens. The college even supports the European GAP system by having visiting post-secondary students from Europe and the UK visit and work in our school. Also, at any one time, about one third of our parents will be traveling overseas, usually on business or to visit family and sometimes, just to holiday.

Present and Future Directions

Having taken all of this into account, the College Council decided some years ago that the future direction of information dissemination for the school would be digital. To that end, in partnership with Corskill Australia, Information Eltham was developed. This year, in line with strategic directions, it has undergone a total restructure to become the Knowledge Network. The entire College community, including all of its remote locations, is networked with different user groups having access rights to the parts of the network that allow them to do their job.

When you visit our website as an outsider, you can only see information about the school and the kinds of publicity that you would expect to see on a school website, but as a member of the school community you have access to far more. Students, their families and teachers are connected in a secure, interactive and transparent learning environment. At school, at home, or wherever they can connect to the Internet, our students can access their work. This means that information, resources, worksheets, curriculum, and reports are all available online. Students can communicate with their teachers and fellow students by e-mail and parents, especially those who are working, either at home in Australia or elsewhere, now have the opportunity for daily involvement in their child's learning experiences.

The Library s Role

The Libraries at Eltham play a key role in providing information of an educational nature to the students through the Knowledge Network. This is not necessarily a new concept. Libraries were begun as repositories for information, and in response to the advent of the digital era, libraries are now collect and document information from the Internet. Schools have been using the Internet since 1993/94 in Australia, and creating resources based on this information since that time, including the creation of web pages which document those resources and which direct the user straight to a particular web site. Teacher-librarians have been doing this for some years now and many commercial information services worldwide have information gathering and dissemination as their reason to exist. Eltham's library practices, in this respect, conform to the accepted norms of the developed world. We even make use of a number of these information services in order to enhance information delivery to our community, which, by its very nature, is physically widespread, both within Melbourne and beyond Australia.

Under the direction of a Facilitator of Information Services, we have a team of very dedicated and committed teachers and technicians. Working closely with the library staff, they ensure that the types of library-based information made available to the college community are appropriately placed and are designed within a set of guidelines. That does not mean though that our creativity has been stifled in any way.

Eltham s Online rE-Sources

This year the College has employed a multimedia expert to work half time in the library. Her other role is to tutor our senior school multimedia students. In her library role she liaises closely with subject teachers and the teacher-librarian to produce topic specific “pages” that are published to the Intranet for teachers and students to use.

Library resources are linked directly from the main Knowledge Network page in two ways: a link to the web-based version of *Athena*, the system used by Eltham College, and another link to *rE-Sources*, our electronic resources page. From *rE-Sources*, is a secondary link to web *Athena* and another link to *E-Databases*. These are databases to which the college subscribes or to which it has free access. In this way, the college community can make use of our physical resources; those documented on the *Athena* catalogue and available for use from within the libraries, and virtual resources, and those resources available as web-links from *Athena*, or from the *rE-Sources* page. *rE-Sources* is organized by Key Learning Areas according to the curriculum guidelines of the Victorian Department of Education and Training, which in turn takes its direction from the Commonwealth Department of Education Science and Training (DEST). Teaching at Eltham follows the basic principles established by DEST, as does its reporting structure.

The websites that end up as links from *rE-Sources* are those that we, as a team, consider to be most useful to the age group studying the topic. For example, students at Eltham could cover plate tectonics at any one of, or at all three year levels which study it (5, 8, and 10), so the links need to be appropriately placed. We take referrals from teachers, search for information ourselves, and sometimes students are involved in the selection of web resources. Often they are the ones who determine whether a site is suited to their learning needs or not. They will very soon tell us if they don't understand something or if it does not contain enough information. Under the web designer's guidance, some of our multimedia students are also voluntarily involved in producing our Intranet resources. We encourage this as it hones students' understanding of design and also their ability to select the “good” information from the “mediocre” or “bad.” They learn to become selectively critical of information sources and, in return, to accept constructive criticism about their own choices.

As information facilitators to the school community, it would be remiss if a teacher-librarian did not guide students to print resources too. This is done in accordance with classroom teachers' wishes, and as the need arises, but increasingly, students' own preferred operating mode is digital. We are therefore beholden unto them to provide the best we can and to teach them how to find quality information for themselves in the most efficient and effective way possible and in the manner to which they would like to be accustomed.

Information Literacy at Eltham

For the past three years at Eltham, all teaching and non-teaching staff have operated as teams rather than as departments or faculties. There are no designated team leaders and tasks are distributed amongst team members according to interest or ability. As a result of this structure, the library has had to find new ways to communicate with teams rather than with an individual as Head of Department. E-mail has proved invaluable as a communication tool and fortunately the e-mail culture is well entrenched at Eltham .

Prior to my arrival at the school three-and-one-half years ago there was a long tradition of non-communication with library about resource needs. The then departments would simply buy their own resources and library would have to second-guess as far as students' needs were concerned. In line with strategic directions, the library was also slowly becoming digitized, much to the consternation of a large number of teachers who preferred the traditional ways and for whom this change was probably a little challenging. The library was, in fact, a rather unpopular place to be, as there was a perception amongst teachers that books were being sacrificed in favour of digital resources. A reasonable core of Humanities teachers, however, still brought their students in to use the books for research on particular topics and to use

the computers for word processing. At the same time as the library was acquiring its digital resources, students in years 11 and 12 were given their own study facilities and workstations, shared one between two students. Students themselves began to see the library as irrelevant albeit for a much different reason to teachers. All the information they would ever need was now at their fingertips - or so they thought. They forgot about books, they forgot about the online resources the library provided for them on each of their computer desktops (unless they were reminded by teachers to use them), and decided that all information on the Internet must be good, true and correct, and that it was the ultimate resource. Otherwise, why would it be there? After a year or so of observing this behaviour I decided to try and make new inroads into altering the way in which students approached their research tasks and teachers made use of library services.

The process began in mid 2001 by targeting those Humanities teachers who regularly used the library, particularly year seven and eight teachers. They eagerly accepted the offer of having topical web pages constructed, as they were now used to the concept of accessing information from links on the Intranet's Humanities Homepage and of having a teacher-librarian do this work for them. My predecessor, now the Information Services Facilitator, had introduced this service to the school. By persistent communication with individual teachers and by word of mouth from one teacher to the next, the requests made to the library by the end of 2002 to produce resource pages increased to the point where it was becoming difficult for one person to complete them in time for classes to use.

Further observation of students' research behaviour during 2001 revealed that despite being given the best of the available websites to choose from and use, students were still doing time-wasting searches during class time, usually with nothing to show for at the end of one hour. There appeared to be little wrong with their search techniques: they had all the right clues, but they just did not know how to use the best search term, how to narrow down a topic, or how to choose an alternative search term. Many also did not understand how to search a library catalog effectively. They were so used to getting a result, even if inappropriate, when searching on the Internet, using whatever term they thought they should use, that they somehow thought the library catalog would also reveal a separate book for every conceivable topic, as the Internet does.

Contained within Eltham's strategic directions statement is the value statement "we will develop multi-faceted life long learners by valuing each individual's capacity to reach their full potential through relevant pathways, and their right to have self-directed learning skills and to be excited by learning." In my humble opinion, these students did not have those learning skills. Many were, however, excited by learning because it was increasingly being conducted in their language, computers.

In early 2002 I decided to compile a number of *PowerPoint* presentations that could be shown to a whole group, using a data projector and a portable screen. These were done for years 11 and 12 students studying "Issues in the Media," and for year seven students as an introduction to research facilities in the library prior to their first project sessions. Both presentations were shown to those students in the early part of the year. This made a marked difference on their ability to understand how to go about research in a self-directed way. At various stages throughout the year, as the opportunity arose, segments of these presentations were shown to students again to recap or reinforce a particular aspect of information literacy.

Although the school population was beginning to drift back to the library, during 2002 a number of things happened that had a profound effect on the way the library was viewed by students and teachers. At the end of 2001, it was decided by a group of teachers in the Senior School that year 11 students needed a degree of supervision during their study periods. During the Christmas break a section of library, about the size of a classroom, was reconfigured for this purpose.

Computers were installed and furniture rearranged to accommodate the expected influx. At first there was slow trickle of students but word soon got around that it was actually quite comfortable and that they were welcome to be there, working or not, as long as they kept their noise to a reasonable level. There is now a constant population of students from all levels at that end of the room and in other spare spots about the library, although year 11 students have priority use of the computers in the year 11's area.

Mid way through 2002, two further things happened. Firstly, the Primary (Early Learning–year four), Middle (years five to eight), Year nine, and Senior School (years 10-12) were created from what were formerly the Primary and Secondary Schools. This meant that children in grades five and six (10 to 12 years old) now had a place in what was previously the Senior School. Secondly, the Senior library acquired an electronic whiteboard.

Here was an opportunity too good to be missed - a teacher-librarian's dream-come-true. All students from ELC to year six have regular, timetabled library lessons, so it would be a really good idea to have them learn the ways of the Senior School and become comfortable with it before they actually arrived one or two years hence, looking for all the world like lost souls in that huge space. They could also be prepared for doing the types of research expected of them in year seven, without them having to give too much thought as to just how this happens, by being ready-made information literates by the end of year six.

After discussion with the Junior School teacher-librarian, it was decided that alternating classes between Junior and Senior libraries would be a good way to achieve this. Of course the Junior teacher-librarian was only too happy to lighten her teaching load a little. This concept was taken to the Director of Middle School who wholeheartedly agreed with the plan and gave it her blessing. As a result, years five and six students now have full and free access to the Senior library and all its resources. Duty of care prohibits us from allowing younger students to wander the half-kilometer from their end of the school to the senior school unaccompanied, but we have a number of year four children who would gladly make the trip a regular occurrence.

During the second half of 2002, the first batch of grades five and six students began on the "Information Literacy Skills" program using computers as their main tool rather than the booklets they were used to filling in at the Primary library, although A4 sized worksheets were provided. Lessons that had a direct relationship to the topics students were covering in their classroom were devised. Most of them took to the use of computers for this purpose like ducks to water, but it also taught me a few things about the way young children think and learn. Prior to this I had only taught adults and children 12 to 18 years. I had assumed that the interpretive skills of these children were greater than they actually are for that age group, and I discovered that they required very specific instructions in order to complete a task successfully, especially some of the less confident ones. As a consequence of teaching "Information Literacy Skills" to this pilot group of students, we now have some very confident, relaxed year seven students (year six of 2002) who have better research skills and make better use of the library than any of their predecessors. As they progress through their secondary years it will be easier to retain them as library users because they have been made to feel welcome, useful and valued and understand how library resources and staff can be gainfully employed to meet their information needs.

Student Learning Management System

The Student Learning Management System (SLMS) is a product jointly developed by Eltham College of Education and Corskills Australia.. It is a key component of Eltham 's Knowledge Network and forms the backbone of all teaching, learning and reporting in the school. It operates on fairly inexpensive software. For a medium-sized school (in Australia this is about 800 students) the SLMS package is A\$3,000 – A\$6,000 per year, and the commercial price for *FrontPage* is A\$179 per year. Corskills Australia has set the final price for running the complete package at about A\$6 to A\$8 per person per year.

SLMS is a transparent, easy to use system which contains students' work requirements and resources from year three (eight years old) onwards, gives parents and students access to these materials from any Internet connection in the world, and allows online reporting from teachers directly to parents and students on an ongoing basis. In other words, as a student completes his or her work, the teacher assesses it and the student and parent will see the assessment as soon as the teacher submits it to the system. Parents' e-mail addresses are linked to SLMS so that if a teacher has any concerns about a student's progress or behaviour, they can be notified. Ongoing dialogue between a parent and teacher can be established in this manner if the parent so wishes. Students are electronically excluded from this confidential aspect of the process. A classroom teacher will discuss concerns with individual students when and if this is required. This is usually done in person if the student is present at the school but can also be done via e-mail if a student is off site. All students' e-mail addresses are recorded in the system but they are also included in the internal e-mail contact lists.

Using SLMS: From a Teacher s Perspective.

Each teacher is set up with access to that part of the database which contains the reports of his/her students only. The first part of the reporting process is to write all the necessary data to the database. This is done by following a series of steps. First, a general statement about the subject is written. Expected student outcomes are stated and a short descriptor for each is also given. A statement about methods of assessment is made, and then assessment tasks are recorded. Resources required by students for completion of their assessment tasks are electronically attached along with a brief descriptor for each to help students identify different types of resource, e.g. "Chemical Elements worksheet," "Marie Curie website," "Excel Plant Classification spreadsheet." The last part of the reporting process is the written assessment of students' work. The teacher has the option of working on each student separately and completely, or of addressing each outcome or assessment task one at a time. Samples of a student's work can also be attached to a report so that parents can see exactly what their son or daughter has achieved.

In the classroom the teacher can refer students to particular resources for given tasks. Doing this means that the classroom teacher does not need to make multiple handout sheets for each class. Students can print out information as the need arises for them. Also, a number of rooms throughout the school are set up with interactive whiteboards. Teachers have the ability to visually demonstrate, illustrate, and highlight in a much more efficient manner by simply calling up the required information rather than spending time handing out pieces of paper. Given reliable computer networks, for remote teacher-student contact, there is little difference other than a physical, personal presence. As a visual aid, PowerPoint presentations can be a substitute for explanations that would otherwise be given by the teacher to a class. This would be attached to SLMS as a resource.

Using SLMS: From a Student s Perspective.

Students access their work and associated instruction by entering "Subject Information" and "Coursework." These are used at Eltham as a back up to classroom instruction. We teachers know how easily students can forget or miss important information during lesson time, so at Eltham they now have little or no excuse for not knowing or not being able to find out all they need to know. The students can access this information at any time they are connected to the Intranet or via Internet, if they are off site. "Subject Information" describes to students and their parents the work a student is expected to complete. It lists and describes each of the anticipated outcomes for a student and describes how assessment will be made against those outcomes. It also describes each of the learning activities the student is expected to complete. "Course Information" describes exactly how students are to work and contains the descriptions of, and links to, each of the necessary resources that will be needed for the work requirement.

Using SLMS: From a Parent s Perspective.

Parents are able to see exactly what their children are expected to do, how they are expected to do it, what they are required to use in order to complete their work requirements, and when a work requirement is due for submission. They are able to contact classroom teachers with any concerns they may have about their child's work and they are able to view their child's progress as it is reported. Reporting is continuous. There are no specified dates, as a teacher will report on a child at the end of each unit of work. By their nature, work units are variable and often flexible in order to accommodate individual needs or to work around major school events.

SLMS and Information Literacy

Upon entering directly into the teaching process, rather than being an "add-on" service, the Senior teacher-librarian was automatically committed to using SLMS and contributing to student reporting. I knew what I wanted to achieve, and knew that it had to be possible, but I didn't have the technical expertise to make it work. Together with our technical team's programmer/ advisor, we have arrived at a totally interactive work program that leads students through the basics of "Information Literacy Skills." At the year five level, it takes students through all the steps of becoming a confident print and online researcher for that age group and at the year six level, reinforces the things learned the year before. It also extends those students enough so that by the time they enter year seven, the beginning of Secondary schooling in

Victoria, they should have a fairly good understanding of the best methods needed to find the right kinds of information for their individual needs.

The work program, which is linked to SLMS as resources for assessment tasks and appears to the student as a file connected to their Coursework, is designed in a way that allows the students to discover resources about the topics they are or soon will be studying with their classroom teacher. This gives students a connection with what they are learning and adds meaning for them to a process that could otherwise be dull and uninteresting. For many it poses a challenge, as some of the tasks are deliberately sparse on explanation. This means that the student has to interpret the information presented or find it by using observation and deduction. In this way there should be minimal reliance on teacher input. The teacher-librarian's role during the discovery process should be that of advisor rather than of "font of all knowledge." Students are therefore encouraged to think carefully about what they are doing as opposed to rapidly firing off in all directions without too much consideration for what needs to be achieved.

If we use the analogy of a picture, we see an overall scene, but we need to interpret the meanings behind some of the elements within its composition. We can sometimes go through life missing the smaller things because we don't know how to see the picture properly. These interactive "Information Literacy Skills" tasks are designed to help students see the picture properly. First students are given the overall scene, then they are asked to break that scene down into its smaller components. Using each of the pieces, they can rebuild the picture with some basic understanding of why it is made the way it is. Hopefully, by doing this, they will be able to assimilate these different methods of breaking up and reassembling the pictures into their daily lives, be it school or elsewhere, to help them see and to make them proficient and successful lifelong learners.

The "Information Literacy Skills" courses are structured for a normal classroom situation where sufficient computers are needed for students to work in pairs. An interactive whiteboard or data projector and screen are highly desirable but not absolutely necessary if networked computers are available.

Information Literacy Worksheets

Using whichever method is available, at Eltham we use the interactive whiteboard, students are led through the background information for a topic. For example, if the class is being taught how to use an OPAC, the steps one would need to follow to find a particular type of resource could be demonstrated to the group. The students would then sit down at a computer, access their SLMS profile, download the "worksheet" and make their way through it. Since direct teacher-to-class contact time is limited to about 50 minutes per fortnight, students are expected to complete the worksheets for homework. This can be done from anywhere where the student is able to access the school Intranet (any Internet-linked computer).

When in class the students should be encouraged to work in pairs as they tend to grasp concepts a little more easily if they are able to discuss the work amongst themselves as they go along. In most instances a topic can take a number of lessons to complete, so students are told to work only to a certain point, whereupon the system will allow partially completed work to be saved. When the topic is fully covered and the student is satisfied that the task is correct and complete, the form can be submitted to the teacher for assessment. At any time during the process, students are free to ask questions, seek guidance from the teacher or parents, help each other, or work alone. Parents are welcome to participate in the homework process, as it will allow them to see the kinds of resources the College offers its students and how these resources will benefit their children in later years of their schooling. To set up a course for a student who is off campus, or for a remote, affiliated group, only minor changes to the current setup would be required, for example, the aforementioned *PowerPoint* Presentation to take the place of direct teacher instructions.

Information Literacy Worksheets: Designing the Form

When designing the tasks, instructions need to be clear and concise. Rather than design something you think will work, design a task that can be accomplished. In other words, once the "worksheet is drafted," complete the task for yourself, as you would expect your students to carry it out. Rethink the parts that don't or can't work.

The Worksheet form is designed using Microsoft *FrontPage*. Teacher's instructions and/or questions are entered directly onto the page while textboxes are created in areas where a student is required to enter data. This is not unlike creating a Word document except that where you would place a dotted line in Word to indicate that input is required, in the form you would insert a text box or scrolling text box. Once complete, the form needs to be coded to allow it to interface with a database. When a student enters data into the form fields, this data writes to the correct database field. We use asp coding to a Microsoft *Access* database.

Linking the Worksheet to SLMS

When the database is set up it is ready for use and linking to SLMS. Files linked to SLMS can be located anywhere on the network, even on the C:/ drive of a workstation. At Eltham, however, the network administrators have decided to keep data together, just for tidy management. Once a student has submitted work, the teacher is automatically alerted by e-mail that a particular student's work is ready for assessment. Submitted forms are stored in their own folder where they can be accessed and assessed by the teacher. The teacher is then able to commit a report to the student's profile on SLMS. In the same way that the Eltham College community benefits from the technologies developed for The Knowledge Network, SLMS, and in a small way, the technology behind the Online Information Literacy program, so too can other groups, as can be seen by our English language development links with CPCE in Beijing. We would like to extend this offer to other interested organizations worldwide to form partnerships that develop a cross fertilization of cultures, information and online learning.

Biographical Note

Marie O'Brien is the Senior teacher-librarian at Eltham College of Education. She has taught in schools across the Australian State of Victoria since 1976 and has also worked in industry. She has recently developed an online, interactive Information Literacy Skills program for 10 to 12 year-olds and several years ago established a library-based online reference web. She is currently completing a computer applications and programming course at Swinburne University. Originally trained at RMIT in Fashion Design, she later entered teaching. She has undertaken post-graduate studies in Careers Education and teacher-librarianship. Marie has been a teacher-librarian for eight years.

Mary Reynolds
College Librarian

and

Dr Irene Lategan
Director of Academic Support
St Stithians College
Gauteng, South Africa

This paper developed out of a collaborative opportunity that arose in an independent high school with an inclusive policy at the time that Curriculum 2005 was introduced. Definitions of collaboration and inclusion are offered with a discussion on the inter-relationships between these two concepts and Information Literacy. The paper describes the classroom practice and provides links to examples of the planning and the students' work. The positive outcomes for both teacher and student learning are described.

Introduction

This paper has developed out of collaborative practice in a large, independent, boy's high school in South Africa. The school implemented an inclusive policy at the start of 2001, a policy that has proved particularly challenging in an environment that prides itself on its excellent academic results. The paper is also the outcome of the investigation of two concepts: the role of knowledge sharing in the school environment and the perception of the library domain as a service provider in the school.

Information Literacy

Information literacy, achieved through the mastery of information skills, is mainly about developing understanding and insight, about the interpretation of information to guide decisions and solve problems. Information skills are the skills that are needed to develop that understanding and insight (McKenzie, 2000). This is highly relevant to Curriculum 2005 that designates prescribed skills as outcomes that have to be achieved transparently. For a student to demonstrate whether he or she has achieved an outcome, it is necessary for them to demonstrate the process by which they have learnt as well as their understanding. The tools for these processes or scaffolds for learning are essentially the tools of information skills.

Collaboration

The challenges provided by the implementation of Curriculum 2005 and the integration of ICTs into the curriculum have formed inter-related catalysts for collaborative development. Zhao et al refer to aspects of the school context that are of central importance to the success or failure of an innovation: the human infrastructure, the technological infrastructure and social support. The implications for teachers are that they need to realize that technology integration requires support from others (Zhao et al, 2002.)

Learning in the 21st Century school environment is supported by an integrated and holistic system or structure. This system is a dynamic relationship between the organization of information and the collaboration between educators.

Collaborative practice is receiving increased attention in school reform. It occurs when two or more teachers meet regularly to concern themselves with the details and interstices of teaching and learning. It is a forum for critical enquiry and fruitful reflection (Howland & Picciotto, 2003, p. 12).

The importance of collaboration in an inclusive school environment is emphasized by Kiesau-Bramer and Krautkramer as follows:

Collaboration is the essential feature of inclusive school communities, in which everyone belongs and participates in meaningful activities, affiliations and alliances among community members are facilitated, and mutual support is the norm. Collaboration involves direct interaction between co-equal parties who participate voluntarily, share in decision making, plan resource allocation, and set common goals. Collaboration applies to numerous school tasks, processes, and activities, including planning the curriculum, assessing students, setting schedules, defining staff roles, designing individual student support plans, and teaching. (Kiesau-Bramer & Krautkramer, 1999, p.144).

They tabulate the characteristics of collaboration as follows:

Characteristics of Collaboration:

Co-equal parties	Joint decision making
Voluntary participation	Trusting, respectful relationships
Shared responsibility	Mutual support benefits
Shared accountability	Converging values

Collaboration should therefore be seen not as a hit-and-miss occasion incidental to the functioning of a school or the pursuit of a curriculum, but as an *essential action*, inherent to the optimal learning environment, and structured into the learning process. The need to join together to solve problems is the basis for many of the collaborative interactions that teachers experience, and especially so in an inclusive school community (Kiesau-Bramer & Krautkramer, 1999, p.134).

Inclusion

Inclusion is a commitment to educate each learner to the maximum extent possible. It involves bringing the services to the learner, rather than moving the learner to the services. It requires that the learner benefits from being in the class and not having to keep up with the others! There are several factors characterizing inclusion:

- Appropriate and enhanced classroom teaching strategies to accommodate diversity
- The focus is on the classroom
- Teaching and learning factors are examined
- Strategies are available for teaching
- The regular class environment is adaptive and supportive
- Systems of support are flexible
- There is an array of choices
- Social development is given prominence
- Cooperative learning and peer instruction methods
- Programmes are individualised to meet the needs of the learner and NOT the learner to meet the needs of the programme
- The main message is one of systemic change to respond to diversity
- Focus is on ability and;
- Problem solving is collaborative
- Lifelong independent learners are encouraged through the development of knowledge and cognitive strategies and skills.

In an inclusive environment, the Learning Support Specialist (LSS) is tasked with accommodating diversity in the classroom. Within the ethos of inclusion it does not take long to realise that every learner requires their needs to be met. Not only are the present learners a different generation, in that they embrace technology and have media savvy but they have a new and unique style of learning and communicating. Learning styles vary as do hemispheric dominance and learner strengths.

Codrington (1998) mentions the following prerequisites for the methodology in classrooms of the future:

- Learners need to be guided into the discovery of knowledge
- Multi-media must be actively embraced as the millennial generation learns best when all senses are involved
- Educators must make use of multi-tasking and a high level of interaction
- Educators must embrace technology (especially computers and the Internet) as an integral part of a meaningful and effective education
- Educators must change the way they think about evaluation

Therefore, classroom practice must change radically to accommodate these needs.

Putting Learning Into Context

The Learning Support Specialist (LSS) saw ICT-based learning as an ideal means of accommodating diversity in the classroom. The Teacher had the subject knowledge, the LSS had the strategies, but both felt ill equipped to tackle the ICT that was crucial to the whole learning process. The Librarian was approached and a significant collaborative partnership evolved.

In 2002, the first collaborative opportunity arose in the history department at Grade 8 level. One of the History teachers (Mr W) had three classes, two of which each had 8-9 learners requiring support. The topic in term two was the Vietnam War and in term three, World War I. For the first topic, Mr W hesitantly agreed to attempt a new type of delivery and a unit was developed through collaboration among the three of us around his suggested outcomes.

We used a co-operative approach initially, starting with a KWL in a round-robin. The students had first to share their prior knowledge and then their questions with the class. Some deep questions emerged such as “If America lost the war, why didn’t the whole world become Communist?” The product was a presentation in a choice of formats that had to be delivered from a particular point of view e.g. war correspondent, ground soldier, Viet Cong etc. Online resources were collated and cached in the Global Resource Centre and the classes were held mostly in the Library or the Computer Lab.

For World War I, the scene was set using “For King and Country” the story of a simple young infantryman who walked away when life in the trenches became too much. The story contrasts his innocence with the sophistication of the officers making decisions about the war in their relative comfort. It is an indictment of war. After the film, the students had to study the assassination in Sarajevo and dramatize it. These are examples of how we accommodated different learning styles.

For most of the classes at least two facilitators were present: either the teacher and the LSS or the teacher and the Librarian. Students with questions asked the nearest person for assistance. In the beginning, we referred to each other. As time progressed, the LSS and the Librarian were able to answer more and more content questions, and the Teacher became more confident with the technology and the methodology. Our interaction as we learnt modeled the collaborative work that we expected of the students. We were all learning together.

Ensconcing Collaborative Practice

At the start of 2003, Curriculum 2005 was implemented in Grades 8 and 9. Overall planning for this had taken place in late July, with departments meeting as Learning Areas for the first time. In the Natural Sciences each teacher was given an integrated unit of work to design. The first resource-based unit was designed around the topic of the *Life and Death of Elephants in the Kruger Park*, looking at what characteristics, conditions and challenges affected the lives of the animals.

A methodology had to be worked out that would incorporate the diverse range of skills (or lack of them) that 160 boys had brought from an infinite variety of feeder schools and backgrounds. The unit devised by the teacher was reworked by the HOD and the Librarian to incorporate the necessary information skills. Resources were restricted to those that were paper based and each class was taken through a preparatory skills lesson that introduced the concepts of a range of resources, mind-mapping and keywords, and reporting opinion “in your own words”. These classes were taught by the Librarian in the Science Labs, with the teachers present. It was an ambitious start. Of the seven classes, we were able to double up on some in the Library, with at least three facilitators working (and learning) together.

Shortly afterwards, the same classes used original resources to investigate a chosen aspect of the school's history. This was planned in the same way with two different history teachers. The history lessons, in turn, overlapped with a further Natural Science unit on rivers suitable for white-water rafting, in which online resources on rivers of the world were introduced through the Global Resource Centre and the Librarian co-taught with the NS teachers. The products of these three units already demonstrate a progression in skill levels amongst the majority of students. The most significant progress has been in breaking the reliance on “cut and paste” and an increased confidence in “writing in your own words”.

The feedback from the teachers involved in the collaborative work has not only been positive, but highly enthusiastic. The process, with as much emphasis on skills as on content has revealed the students learning and their weaknesses. The students are learning to interpret information and are gaining in their understanding and insight. At the same time the facilitators were able to reflect on the learning process and interact, increasing our own understanding and insight.

Conclusion

What we have achieved is no more than the ideal that every teacher-librarian might aspire to. We have perfected neither the process nor the product. However we have been able to capitalise on an opportunity with significant results for both the teachers and the learning.

Through collaboration, the barriers between the ICT lab, the Library and the Classroom dissolve and the Librarian is a key member of the collaborative team. S/he is involved in the learning process from the planning stage through to the assessment stage and is as likely to be found in the classroom and the ICT lab as in the Library. Teaching and learning happen in all three locations depending on the particular stage of the process. The traditional complaint that teachers do not bring classes to the library or do so without consulting with the Librarian thus falls away.

References

- Codrington, Graham. (1998). Generation X: Who, what, why and where to? Retrieved from 12 July 1999 at <http://home.pix.za/gc/gc12/genx/thesis>
- Howland, Jonathan & Picciotto, Henri, (2003) . Into the province of shared endeavor: the benefits and challenges of teacher collaboration. *Independent School* 62 (3), pp.12-19
- Kiesau-Bramer, Mary & Cathy Krautkammer, 2000, 'Tools for constructing inclusive school communities', In *Inclusive education for the 21st Century: a new introduction to special education* by J. Deanna, E.B. Kozleski, & N. K. French. (pp.113-146). Belmont, CA: Wadsworth.
- McKenzie, Jamie. (2000). *Beyond technology: questioning, research and the information literate school*. Bellingham: FNO Press
- Zhao, Yong, Pugh, Kevin, Sheldon, Steve, Byers, Joe. (2002). Conditions for classroom technology innovations. *Teachers college record* 104(3),p. .482-515. Retrieved on 8 April 2003 from <http://www.tcrecord.org/PrintContent.asp?ContentID=10850>

Biographical Note

Mary Reynolds is the College Librarian at St Stithians Boys College in Gauteng, a position she has held since 1989. Prior to that she held positions in medical, architectural and university libraries both in South Africa and England in the 1970's. Mary finds it fascinating, but challenging to be involved near the cutting edge of school library practice as it has evolved in parallel with the integration of technology and the demands of Curriculum 2005. She has been extremely fortunate in that the college has supported and encouraged the development of the library services on a campus of five schools with four libraries. She is at present studying through the University of Pretoria for a Masters degree, focusing on the relationship between ICTs, school structures and collaborative practices. She has presented papers at previous ISASA and Millennium Minds conferences and to the international ISIS Online Conference. During 2001 she attended the ASLA XVII conference in Queensland before visiting schools and other educational agencies to investigate collaborative practices and the knowledge management concept in education from the school librarian's perspective.
mreynolds@stithian.com

Dr Irene Lategan is the Head of Academic Support at St Stithians College in Randburg. Since January 2001, an Inclusion Model has been practised at the College, whereby learners with special educational needs are included in the mainstream. She has a D Ed in Orthopedagogics and research for her thesis was undertaken in Australia (Queensland) and New Zealand (Auckland). She spent eighteen years in specialised education and has attended and presented at conferences nationally and internationally. Areas of particular interest include meeting individual needs in the classroom, ICT based learning, generations X & Y, assisting teachers in accommodating diversity in the mainstream classroom, holistic approaches to reading and cognitive education. Email: ilategan@stithian.com

Diljit Singh

Associate Professor

Faculty of Computer Science & Information Technology

University of Malaya

Malaysia

Technology offers great potential but can also create inequities and problems. One such inequity is the digital divide. The digital divide refers to the gap between those who can effectively use new information and communication tools, such as the Internet, and those who cannot. Those who are on the less fortunate side of the divide lose out in education, training, shopping, entertainment and communications opportunities. The causes of the digital divide are numerous, and include costs, access problems, lack of skills, cultural issues, and personal factors. As a result, reducing the digital divide needs to take a multi-faceted approach, which includes creating awareness and promotion, facilitating access, developing necessary skills, providing reliable support, developing suitable content, and ensuring community involvement. The mission of school libraries is threatened as long as the digital divide exists, and it is important that school libraries take steps to reduce this divide. These steps should include the approaches mentioned earlier, as well as using coordinated national, regional or local strategies, and collaborating with other organizations.

The Growth and Promise of Technology

Technological developments offer so many promises of a better life, while at the same time they create unforeseen inequities and problems. One of these inequities that has emerged is the “digital divide”. The digital divide refers to the gap between families, organizations, regions, and nations at different socio-economic levels, in the opportunities and abilities to access information and communication technologies and to the use of information for a variety of activities. The problem is serious enough to warrant literally hundreds of reports, surveys, commentaries, and initiatives at the local, national and international levels. This paper argues that school libraries also have an important role to play in reducing the digital divide.

Today, we find ourselves in the best of times and in the worst of times. The development and convergence of several technologies, including computers, multimedia, telecommunications, the Internet and the World Wide Web, have brought us quantum leaps closer to being able to deliver on the promise of technology to re-shape our entire culture. Never before have we had so much real potential to fully exploit the capabilities of the new technologies. We see real evidence around us every day that the technological developments are actually changing our lives (Rogers, 1996).

The potential of technology is indeed immense. This potential can be summed up in the 5 I's – Information, Interaction, Interactivity, Individualization, and Increased access. Technology has the potential to provide an increased quantity, better quality, and current *information*. It can provide enhanced *interaction* between the teachers and the learners, and among learners, leading to a borderless learning community. Technology encourages greater *interactivity* in the learner's engagement with content, especially in constructing relationships, and relating new knowledge to existing structures. Technology allows for greater *individualization* in customization for flexibility and personal attention, and personalization through the learner's choice of pace, interface, and navigational direction. Technology also allows *increased access*, free from constraints of time, place, teacher, various -isms, and allows for life long learning (Pan, no date).

Yet, technology has also created many problems, one of them being the digital divide.

The Digital Divide

The term “digital divide” came to public attention after a 1995 study by the Markle Foundation revealed that the same divergence found in society along cultural and racial lines, was found online and offline too. Lloyd Morrisett, the former president of the Markle Foundation, called it a digital divide between the information ‘haves’ and ‘have-nots’. These findings have been subsequently supported by other studies (Stoicheva, 2000).

The digital divide has many definitions. One frequently used definition characterizes it as “differences due to geography, race, economic status, gender, and physical ability in access to information through the Internet and other information technologies and services, and in the skills, knowledge, and abilities to use information, the Internet and other technologies” (American Library Association, 2001).

There are many other definitions of the digital divide, which focus on various elements of information and communication technology (ICT) and its usage. Bridges.org, an international organization working to span the digital divide through policy initiatives and ground-level projects, lists five different perspectives on the digital divide (Bridges.org, 2001):

- *the digital divide is a lack of physical connections and training* – computer hardware, network access, and (in some arguments) training, is required to bridge the digital divide, and governments, NGOs and private initiatives should supply them;
- *the digital divide is a lack of computers, access and training, but the problem will solve itself in time* – computer hardware and network access are required, but the market and selective development projects will solve this problem on its own by steadily lowering prices, fostering an IT training sector, and extending infrastructure to outlying regions;
- *the digital divide is a lack of computers, access and training, exacerbated by ineffective government policy* – government actions (or inaction) hinder the development and use of computers, and until these policies are changed the digital divide cannot be resolved;
- *the digital divide is a lost opportunity, with disadvantaged groups being unable to effectively take advantage of ICT to improve their lives* – what really matters is how the technology is used, and its potential to improve the quality of life for disadvantaged groups; effective use requires computers, connections, training, locally relevant content, and real applications of technology to fit immediate needs.
- *the digital divide is a reflection of the lack of basic literacy, poverty, health and other social issues* – computers are useful, but nothing will enable a society to bridge the digital divide until basic literacy, poverty, and healthcare issues are addressed.

There are many misconceptions about the digital divide too. For example, the digital divide is often looked at just as a lack of computers and connections. Yet, it is a social problem that is caused, in part, by inequities in the ability to access and to use information communication technologies. As this problem impacts the opportunities for participation in social and economic activities, the digital divide needs to be seen as a threat to social and economic justice (Mitchell, 2001). Reducing the digital divide can help people to achieve their potential, promote sustainable economic and social development, and basically improve their quality of life.

There is also a misconception that the digital divide is a rich country-poor country issue. Although the scope of the digital divide is global, the divide is not between countries only; it also exists within a country, and even within cities. Even within advanced countries like the United States, there are findings of a serious and growing digital divide in communities, in the workforce, and especially in the classrooms, that are quickly marginalizing entire segments of the American population (Foster, 2001). There are disparities within countries based on race, income, geographical location, educational levels, age, gender, and disabilities.

Implications of the Digital Divide

The implications of the digital divide are far-reaching. The National Telecommunications and Information Administration [NTIA] (2002) summarizes it very succinctly:

To be on the less fortunate side of the divide means that there is less opportunity to take part in our new information-based economy, in which many more jobs will be related to computers. It also means that there is less opportunity to take part in the education, training, shopping, entertainment and communications opportunities that are available online.

In many cases, even though the technology is available, people do not use it because either they do not understand it, they are uncomfortable using it, they cannot afford it, or they cannot see its utility. For them the digital divide means lost opportunities – opportunities to offer better educational tools and courseware to school children, opportunities to use information tools to bring medical applications to rural villages, opportunities to give local businesses access to global markets, or opportunities to make governments more effective and efficient (Bridges.org, 2001). Being on the less fortunate side of the digital divide also affects business. Business leaders are just as concerned about the digital divide, not only because it hampers business-to-business (B2B) activities but also because consumers are denied access to the Internet, making it difficult for them to participate in business to consumer (B2C) level electronic commerce (Gaillard, 2001).

There is evidence of a close association between ICT use and per capita national income, underlying the lost opportunities for economic growth among those unable or not using information technology. This is reinforced by the finding (from OECD countries) that multi-factor productivity growth is positively associated with ICT use (International Labour Review, 2001). The long-term stability of national economies and international markets is also at risk, particularly if the current trends of the “brain drain” continue to draw people out of developing countries that are on the less fortunate side of the digital divide, towards areas with better promises of economic prosperity.

Causes of the Digital Divide

In recent years, there have been many studies and analyses on the causes of the digital divide. These studies have ranged from detailed empirical studies of the nature and scope of the divide to popular articles looking at the general nature and growth of the divide. Most analyses have been driven by two key objectives: firstly, a desire to identify the extent and nature of the digital divide and secondly, a desire to identify policy prescriptions to narrow the digital divide. A clear understanding of the underlying causes of the digital divide is necessary for the development of appropriate policies that will be effective in narrowing the digital divide. Inadequate attention to the underlying causes of the digital divide means that there is a risk that the policies will be implemented but will not always attain their desired goals (Wijewardena, 2002).

From these studies and analyses, many reasons have emerged as to why a significant proportion of the population cannot, or does not, make full use of the Internet and ICT in general. However, no single, simple cause has been identified for the digital divide. Instead there are many factors, which have been grouped and organized in various ways. One classification (Darlington, 2002) categorizes the causes into the lack of 5 C's – connectivity, convenience, cost, cash, confidence, and culture, and 1 Y - why. These factors can be further expanded to 9 C's:

- *Connectivity* – the need for an access device and a connection to the Internet,
- *Capability* – the need for knowledge and skills to make use of the technology,
- *Content* – the need for material to meet the user's needs,
- *Cause* – the need for a compelling reason to use the technology,
- *Cost* – the initial and continuing costs of connection and usage,
- *Convenience* – the ability to use the technology at a time and place that is appropriate, more so by the less-able or disadvantaged users,
- *Confidence* – the need for users to be confident in using the technology, not to fear what they, or their children, will encounter, and also, the need for security and privacy when making financial transactions,
- *Cash/Credit Cards* – the need for cash cards and or credit cards, especially when making financial transactions,
- *Culture* – the norms of society where information is valued and used.

All these factors affect the use information and communications technology, and the absence of one or more of these can result in the digital divide.

These factors apply to varying degrees in many parts of the world. A Scottish official document (Scottish Executive, 2001) summarizes the causes of the digital divide as:

- *Perceived or Actual Costs* – the perceived or actual cost of PCs and other equipment, and the perceived or actual cost of web-related telephone calls,
- *Access* – the lack of near-by/affordable facilities providing access to the Web/ICT, and the lack of work-related access to ICT and the Web to build skills and awareness,
- *Skills* – the lack of literacy and numeracy skills, ICT skills, and the lack of knowledge/appreciation of the information and services that can be found on the Web,
- *Cultural Issues* – the lack of a critical mass of other Web/PC users among community/ family/friends, and other cultural barriers, and
- *Personal Factors* – such as the lack of confidence, lack of credit card/bank account, a fear of technology, a feeling it is too late in life to learn about new technologies, no interest in the Internet, physical difficulties such as poor eyesight or manual dexterity and co-ordination.

Interactions among these factors also probably play a part too. In one study in the United States, it was noted that there were some major social (internal) components behind African American students' reluctance to use technology, which resulted in failure to integrate computer technology into their daily lives. The study found significant differences in computer self-efficacy, and at-task time between groups when analyzed on the basis of race and gender (Foster, 2001).

A section of the Technology Counts 2001: *The New Divides*, identifies the kinds of students who appear to be losing out when it comes to technology. For a variety of reasons, those students include poor children, minority students, girls, low achievers, students learning to speak English, children with disabilities, and youngsters who live in rural areas. This coincides with findings within the National Technology Readiness Survey (NTRS) suggesting that education transcended Internet access as a major factor contributing to the digital divide.

It is therefore important to keep in mind that while the hardware, access and connectivity are important factors, the digital divide is not just about a lack of access to computers and information technology. Many factors come into play, and this should be recognized in efforts to reduce the digital divide.

Reducing the Digital Divide

Knowing the disadvantages and causes of the digital divide, it is then imperative that efforts be taken to minimize or at least reduce the digital divide. Various factors need to be taken into consideration in these efforts.

For a start, policies and programs need to incorporate a broader 'social vision' for lifelong learning rather than just giving people computers and providing basic skills. One study indicates a positive correlation between the use of Internet technologies and variables such as organization size, assets, IT investment, IT personnel, and history of innovation adoption (Zimmer, 2001). All these need to be given attention.

Various strategies, approaches and proposals have been put forward and can be used to reduce this digital divide, some narrowly focused and some broad-based.

Narrowly focused programs can have a small but significant impact. For example, a project called "Unwiring the World" uses a simple solution to provide access to 21st century technology in a remote Central American jungle. Founded in 1998 by Alex Pentland, of the MIT Media Lab, and Jose Maria Figueres, former president of Costa Rica, Unwiring the

World is creating portable digital town centers: recycled shipping containers furnished with telemedicine units, cash machines, micro computer schools, soil-and-environment testing labs, FM radio stations, wireless satellite links, and big-screen televisions. Seven of the units, dubbed LINCOS, or little intelligent communities, have been installed in off-the-grid areas in Costa Rica and the Dominican Republic, where they are being used by residents to help form agricultural cooperatives, launch e-commerce initiatives, and access education and employment information online (Schwartz, 2001).

On a broader scale, the Scottish document, Digital Inclusion (Scottish Executive, 2001) summarizes the types of actions that need to be taken to overcome the digital divide. These actions can be categorized as;

- *Awareness and Promotion* - it is essential that we ensure excluded individuals and groups are aware of the opportunities that ICT can provide,
- *Access* – all people, but particularly disadvantaged individuals and communities, must have access to ICT at the time, place, method and price appropriate to their needs and lifestyles,
- *Support* - providing reliable, accessible and cost-effective sources of advice and support is crucial,
- *Skills* - we need to provide the basic computer and technological skills that will instill individuals with the confidence to use ICT,
- *Content* - we must ensure that disadvantaged individuals and communities are provided with, or develop themselves, online content and services that they value and wish to use,
- *Community Involvement* - we need to make sure that the initiatives are sustainable at a local level, and that local communities have a sense of ownership.

Libraries are well suited to helping address the digital divide. Libraries have provided and continue to provide a full range of tools. Librarians act as information navigators who help people find the information they need and want, and provide a variety of educational experiences to support lifelong learning. Four of the essential tools required to bridge the digital divide are readily available through the library, including

- *Literacy* - the foundation for all information use
- *Access* - to free public information
- *Training* - to empower individuals to find and use information effectively, and
- *Content* - the rich source material that is needed to make the Internet a powerful information resource (Web Wise 2001).

This statement is supported in many places internationally. For example, in New Zealand, LIANZA/TRW advocates the process of tackling the digital divide must recognize that a key access outside of the home should be through the public library and school library networks. There also needs to be formal recognition of information literacy as an essential skill in a knowledge society. This needs to be reflected in the training of teachers and in recognition of the role public and school libraries play in this training process (LIANZA, 2001).

In the United States, libraries are helping to bridge the digital divide. Libraries have provided information access and services in the United States (US) for more than 100 years. Most libraries have the technical infrastructure, electronic resources and existing facilities. More than 90% of public library outlets [in the US] offer public access to the Internet and other electronic resources. Librarians are trained professionals who assist and instruct patrons (American Library Association, 2001).

The Role of School Libraries in Reducing the Digital Divide

School libraries and their services are vital to the development of a literate population that is able to participate fully in a thriving society, democracy, culture, and economy. The school library provides information and ideas that are fundamental to functioning successfully in today's information and knowledge-based society. The school library equips students with life-long learning skills and develops the imagination, enabling them to live as responsible citizens (IFLA/UNESCO, 1999).

The digital divide is a significant barrier to fulfilling this mission. As long as there are inequities in access and use of information technology, the mission will not be fully accomplished.

School libraries can play an important role in reducing the digital divide. They have a number of advantages and early starts, including:

- School libraries have a long history of instruction,
- School libraries have a captive audience,
- School librarians often enjoy close working relationships with teachers and the community,
- School librarians often have a teaching background,
- School libraries often have computers available that ensure basic technology access and skills.

As such they can, and should, take a wide range of steps to address the digital divide. These steps need to address the root causes of the digital divide – the lack of awareness, access, skills, appropriate content, and culture. Using the Scottish framework mentioned above (Scottish Executive, 2001) of creating awareness and promotion, ensuring access, providing reliable support, ensuring necessary skills are available, providing relevant content, and ensuring community involvement, school libraries can apply these approaches to their own specific situation and context.

- *Creating awareness and promotion* - school libraries have a captive audience of students and teachers who use the library frequently. School libraries also frequently carry out publicity campaigns, from the use of simple bulletin boards to sophisticated staged events. It is therefore not difficult for school libraries to create an awareness of the importance of ICT among the school population. But school libraries must go beyond just creating awareness. They must generate a genuine and lasting interest in using ICT. They must also ensure that disadvantaged children are aware of the opportunities that ICT can provide, and are encouraged or provided with incentives to take advantage of it.
- *Providing access and connectivity* – school libraries have traditionally provided facilities that were too costly or not practical for individuals to acquire. The provision of ICT follows similar lines, whereby school libraries can ensure that at least a small number of functional computers are available, and a system exists that allows every teacher and child to use the technology. Schools libraries must strive towards ensuring maximum access and connectivity for students and teachers. They need to make sure that barriers and constraints are removed, or at least minimized, for all. They need to make sure that the disadvantaged children have access to ICT at the time, place and method appropriate to their needs and lifestyles. This access does not need to be state of the art – basic computers with a dial-up modem are often sufficient. The lack of computers and connections is often a challenge, especially for schools in the rural areas. This can be overcome with a coordinated effort, such as a large-scale donation system of used computers, functioning and non-functioning, similar to the California-based Computer Recycling Center. This would help reduce the problem of a lack of tools by providing rural schools and communities with equipment donated by homes and businesses. The non-functioning computers donated could be used for parts to repair other computers or to teach students how to repair them and their components. Functional computers could be immediately shipped to schools and computer workshops, where students and teachers can use them. There can also be centers set up throughout the nation, where the donated computers would be gathered and packed. A software-donating component could also be incorporated into this plan. Floppies for Kiddies, a company in the United States that accepts donated software can serve as a model for this idea. Steps like these can be initiated by NGOs or even by the government to help solve this portion of the problem.

- *Ensuring necessary skills* – sometimes a lack of access to technology may not be the only problem. Regardless of the level of access, teachers and students may not have sufficient training and knowledge to use the technology and make the most of the equipment available within the school. The purpose of using ICT is not to make a programmer out of everyone. Using technology is about enabling ordinary teachers and students to use ICT to make a real difference in their lives, and especially in their teaching-learning. To do this they need basic computer and technological skills that will instill in them the confidence to use ICT and the Web efficiently and effectively. School libraries can provide the opportunities to develop these skills through formal and informal training programs.
- *Providing reliable support* – it is not enough to just provide computers and connections, with training; reliable support is also necessary. Teachers and students need to have someone to turn to when having difficulties or problems, and technology needs to be attended to quickly when it is not functioning. Without support, teachers and students can lose interest or, worse, be too afraid even to experiment with technology. Providing reliable and accessible sources of advice and support on ICT and the Web is essential. Again, the school library can arrange for this support through trained teachers and students.
- *Providing relevant content* – the school community will be more inclined to use ICT if they see it as being something worth their time and effort. Students and teachers must thus have access to, or develop themselves, online content and services that they value and wish to use. School libraries, for example, can create websites and link to services providing local information. They can also provide information that is directly relevant to the teaching-learning of students and teachers. Developing content does not require sophisticated resources and high level skills; simple software skills and free hosting services can provide much local and relevant content.

In addition to the strategies and goals mentioned above, other approaches can also be considered.

- *National, regional and local strategies* – coordinated efforts are needed at the national, regional and local levels to reduce this divide. There are times where local efforts by schools must be complemented by national or regional/state policies and programs. Ensuring basic infrastructure, such as availability of electricity and telephone lines at reasonable rates, is a pre-requisite but must be done at the state or national level. Federal or state governments can introduce policies that would allocate a portion of the federal or state taxes imposed on large companies to specifically go towards the development of computer access. This can be done at existing centers (schools, libraries, community centers) in low-income and rural areas that otherwise would not have little or no computer access. The communities would have to come together to ensure the passing of these policies, and it would require "national technology literacy" coalitions dedicated in teaching the underprivileged public. Another idea would be for the government to create an incentive in order for these companies to provide computers and Internet access to these neighborhoods. Providing tax relief, even a fraction of a percentage point, or dropping some tax demands by the government on companies could help provide the necessary facilities.
- *Collaboration* – it is often difficult for school libraries to attain the goals alone, as they are usually limited in staff and financial resources. As such there is a need for collaborative efforts with other schools, parent-teacher associations, school library associations, businesses, non-governmental organizations, and any other organization that is in a position to help. In areas where the schools are too small to provide cost-effective access and connectivity, school libraries can take the initiative to collaborate with public libraries (where available) or community centers to provide computer access to the students. For example in Boston [USA], there exist Computer Clubhouses which are used for children in inner cities to have the access to computers and programs whenever they need or want to. They have mentors to help the children learn how to use different programs as well as learning basic computer skills. The mentors are high school and college students as well as professionals that volunteer their time at the clubhouse. The children are also encouraged to work together, in groups, to help each other learn. Programs modeled after these clubhouses can be beneficial to many rural areas by offering people the freedom to learn at their own pace in an environment where they will feel comfortable exploring new ideas.

School libraries can carry out various other projects to attain these goals. Projects and initiatives that combine access skills, developing relevant content and community involvement are likely to be more effective - each reinforcing the benefits achieved by the other.

Conclusion

The digital divide is a reality. The divide is more than just a lack of computers; it is a social problem and it is a global phenomenon, which can lead to even more problems if it gets wider. Those who are on the fortunate side of the divide may not feel the effects of it, but like any other social problem, the digital divide needs to be addressed before it gets worse. We need to wage a war on the digital divide, and school libraries must be a key element in that war.

References

- American Library Association, Office for Information Technology Policy. (2001). *What is the digital divide?* Retrieved March 15, 2003 from <http://www.ala.org/oitp/digitaldivide/what.html>
- Bridges.org (2001). *Spanning the digital divide: Understanding and tackling the issues. Annex 1. Perspectives on the Digital Divide.* Retrieved March 15, 2003 from <http://www.bridges.org/spanning/annex1.html>
- Foster, Jesse J. (2001). *Self-efficacy, African-American youth, and technology: Why the belief that 'I cannot do that' is driving the digital divide.* Unpublished doctoral dissertation, University of Alabama.
- Darlington, Roger. (2002). *Overcoming the digital divide: Internauts and Internots.* Retrieved March 16, 2002 from <http://www.rogerdarlington.co.uk/digitaldivide.html>
- Gaillard, Franklin D. (2001). *Understanding the digital divide as it relates to electronic commerce.* Unpublished doctoral dissertation, Old Dominion University.
- IFLA/UNESCO (1999). *School Library Manifesto: The school library in teaching and learning for all.* The Hague: International Federation of Library Associations and Institutions.
- International Labour Review (2001). *The digital divide: Employment and development implications.* Retrieved March 16, 2003 from <http://www.ilo.org/public/english/support/publ/revue/download/pdf/intro012.pdf>
- LIANZA / TRW [Library and Information Association of New Zealand and TeRoopuu Whakahau, Maori Library and Information Workers Association.] (2001). *... towards a knowledge society: National information strategy* [pamphlet].
- Mitchell, Matthew M. (2001). *Exploring the future of the digital divide through ethnographic futures research.* Unpublished doctoral dissertation, Gonzaga University.
- National Telecommunications and Information Administration, U S Department of Commerce (2002). *A nation online: How Americans are expanding their use of the Internet.* Retrieved March 15, 2003 from <http://www.ntia.doc.gov/ntiahome/dn/index.html>
- Pan, Daphne (no date). *e-Education: Delivering the promise of technology.* Center for Development of Teaching and Learning, National University of Singapore. Retrieved March 14, 2003 from http://www.cdtl.nus.edu.sg/e-ed/cdtl_files/frame.htm
- Rogers, Al. (1996). *The failure and the promise of technology in education.* Retrieved March 14, 2003 from <http://www.gsn.org/teach/articles/promise.html>
- Schwartz, Bonnie. (2001). *Unwiring the world: Small, intelligent communities are working to combat the digital divide.* Retrieved March 14, 2003 from <http://www.fastcompany.com/online/43/lookfeel.html>

Scottish Executive. (2001). *Digital inclusion*. Retrieved March 15, 2003 from <http://www.scotland.gov.uk/library3/enterprise/dics-04.asp>

Stock, Elisabeth. (no date) *Computers for Youth; Focusing Digital Efforts on the Home*. Retrieved March 15, 2003 from <http://www.digitaldividenetwork.org/content/stories/index.cfm?key=107>

Stoicheva, Mila. (2000). *The Digital Divide and Its Implications for the Language Arts*. ERIC Digest D153. ED442138

Technology Counts 2001: The New Divides, looking beneath the numbers to reveal digital inequities. *Education Week*, 20 (35), May 10, 2001.

Web Wise (2001). [Conference Program] *The digital divide: A conference on libraries and museums in the digital world*. Retrieved March 15, 2003 from <http://www.imls.gov/pubs/pdf/pubwbws01.pdf>

Wijewardena, Madura. (2002). Assessment of existing empirical analyses of the underlying causes of the digital divide and policy prescriptions to deal with such underlying causes of the digital divide - ideas for policy makers.

Communications Research Forum. Retrieved March 14, 2003 from http://www.gtlaw.com.au/templates/employee/list_publications_2.jsp?team_id=177&empname=Madura%20Wijewardena

Zimmer, Eric A. (2001). *For to all those who have, more will be given: The Matthew effect, nonprofit organizations, and the adoption of Internet technologies*. Unpublished doctoral dissertation, University of Pennsylvania.

Author Note

Diljit Singh graduated with a B.Sc. from the University of Malaya, Kuala Lumpur, and an M.S. and Ph.D. from Florida State University, USA. He taught in two schools, and worked at the state and federal levels of the Ministry of Education Malaysia before joining the university. Diljit is currently an Associate Professor at the Faculty of Computer Science and Information Technology, University of Malaya, 50603 Kuala Lumpur, Malaysia. He is also a past Director for Asia, International Association of School Librarianship. E-mail: diljit@um.edu.my

Appendix

Selected Resources on the Digital Divide

These resources represent a small sample of resources available on the Internet related to the Digital Divide. Selection is based on regularly updated sites, and those that have international applications, rather than country-specific applications.

Bridges.org <http://www.bridges.org/digitaldivide/index.html> is an international non-profit organization with a mission to help people in developing countries use information and communications technology to improve their lives. It has a well thought out web site on the digital divide.

Digital Divide Network <http://digitaldividenetwork.org/content/sections/index.cfm> examines the digital divide from many perspectives. The web site offers a range of information, tools and resources that help practitioners stay current on digital divide developments. It also serves as forum where practitioners can share their experiences with colleagues around the world.

Digital Inclusion <http://www.scotland.gov.uk/library3/enterprise/dics-00.asp> is a brief but comprehensive Scottish Executive document on the need for a digitally inclusive society - where all can play their part in new ways to strengthen communities and where each individual can gain the benefits of being online.

Digital Opportunity Task Force www.dotforce.org/ is a report of the G8 Digital Opportunities Task (DOT) Force that outlines how governments, businesses and civil society can work together to advance human development and reduce poverty through the use of information and communications technologies.

UNESCO Observatory Portal: Digital Divide – International Positions [http://www.unesco.org/webworld/portal_observatory/Access - Applications/ Digital Divide/International Positions/index.shtml](http://www.unesco.org/webworld/portal_observatory/Access_-_Applications/Digital_Divide/International_Positions/index.shtml) provides useful links to resources on the digital divide.

***Information Needs Of Learners At Emzamweni High School, Inadi, South Africa:
A Preliminary Report On An Assessment Linked To The CHESP Community
Based Learning Model***

Christine Stilwell

and

Fiona Bell

University of Natal

Pietermaritzburg

South Africa

This paper reports on the information needs of learners in the Emzamweni High School in Inadi near Pietermaritzburg Msunduzi in KwaZulu-Natal, South Africa. A preliminary report, it presents the outcomes of a survey based on the critical incident approach. Students in the Post Graduate Diploma in Information Studies Programme conducted interviews over a two year period from 2001 to 2002. The students were enrolled for an exemplar in the Community Higher Education Service Partnerships project in community based learning at University of Natal, Pietermaritzburg. The project was hence an exercise in training student researchers and is useful for what it revealed about the critical nature of the needs of these learners.

Introduction And Background To The Study

This is a preliminary report on the information needs of learners in the Emzamweni High School in the community of Inadi near Pietermaritzburg-Msunduzi in KwaZulu-Natal, South Africa. It brings together data collected by Post Graduate Diploma in Information Studies (PGDIS) students over a two year period, 2001 to 2002. The students were enrolled for the *Information Users and Use* module, an exemplar in the Community-Higher Education Service Partnerships (CHESP) project on the Pietermaritzburg campus of the University of Natal (UN). As the study is largely qualitative the voices of the students are reported *verbatim* in their comments and reflections. In this section key players are introduced and information and information needs defined.

University of Natal and the Information Studies Programme

The University of Natal (UN) was founded in Pietermaritzburg as the Natal University College in 1910 (Brookes & Webb, 1965, p. 247). In its present configuration the university straddles four campuses, Howard College and the Nelson R. Mandela School of Medicine in Durban, the Edgewood campus (since 2001) and the Pietermaritzburg campus. The University is merging with the University of Durban Westville, a formerly disadvantaged institution set up in the apartheid era as a university for South Africans of Indian origin.

The UN programme in Information Studies, on the Pietermaritzburg campus, is one of 15 such South African departments (Hart, 2002, p. 35) and offers a full suite of qualifications commencing with an undergraduate module in Information Literacy which is part of an Access Programme, created to facilitate access to a degree for students who are perceived to have potential but have low university entrance level points. Higher Degree programmes in Information Studies, the B.Bibl Honours, Master's and Doctoral programmes were introduced in 1978. Other foci include the Diploma in School Librarianship, and Postgraduate Diplomas in Museum Studies and in Records and Archives Management.

The first professional qualification, PGDIS, requires a Junior Degree in any field as a prerequisite. Modules offered in this Diploma formed part of the community based or service learning initiative introduced into UN in 2001. The CHESP initiative, described in the next section, provided an opportunity for the UN to formally implement community based learning. Becker (2000) and De la Pena McCook (2000), for example, have made the case for a service learning model in Library and Information Studies curricula.

CHESP and Community Based Learning

The theoretical framework on which the concept of community based learning in this context is that of a 'scholarship of engagement' (Boyer, 1996), which was further developed by Bawden (1999) with CHESP in mind. This idea of engagement involves a connection between university-based lectures and research projects with off-campus sites of knowledge generation and action. The core purpose of this engagement is to address pressing issues in society, responding to the challenges of social development and democratic citizenship (Boyer, 1996). Funded by the Joint Education Trust and the Ford Foundation, CHESP is a national initiative, aimed to further the transformation of South African universities towards sustained community engagement in their curricula, to develop local communities as sites of civil society, and to enhance the provision of appropriate services in these communities (Nuttall, 2001). The CHESP concept of community learning involves a dynamic process, linking communities and their priorities, issues and problems with student learning, research and development. In this model a third element constitutes the service provider.

In this case the proposed service provider was Education Library, Information and Technology Services (ELITS), the government department responsible for the planning and infrastructure of school libraries and for their provision and maintenance. It was envisaged that the service provider would work with the University to provide advice and guidance for the research and would ultimately gain by the utilisation of the results for the implementation of a functioning school library, to the benefit of the community. Although very keen to participate, for various reasons the service provider was unable to take an active role in the process.

The CHESP core group of the Pietermaritzburg campus focused on the Inadi community, a rural settlement comprising 18 villages on the outskirts of the city of Pietermaritzburg-Msunduzi. The Emzamweni High School in Inadi was chosen as the service learning site for a variety of reasons, including the fact that it is a rural area and historically disadvantaged. In the late 1980s this community was badly affected by politically motivated violence. Myende, a student in 2002 and a resident in the area reports how "learners were killed on their way to and from school" (Myende, 2002, p.c3). As late as the early 1990s two new administration buildings at the school were set on fire.

At the time of the survey the school had approximately 700 learners and 22 teachers. It had an excellent Matriculation pass rate and many of its matriculants pursued tertiary level studies. The library, however, from personal observation was in a sad state of neglect and little suitable material was available. Polak (2002, p. 5) from the class of 2002, reports it was "not conducive to a learning situation". The Information Studies component of the CHESP project aimed at assessing the information needs of the Emzamweni High School learners. Information and information need are defined in the next section.

Information and information need

Information is defined by Kaniki (2001, p. 191) as "ideas, facts, imaginative works of the mind and data of value potentially useful in decision making, question answering, problem solving etc". The term "information need" is related to the term "use" which is described next. Use implies a response to need which Dervin (1980) sees as a state that arises within a person thereby suggesting some kind of gap that requires filling. As Kaniki (2001, p. 188) suggests, such general needs may be physiological, psychological, social and economic. He adds that in our daily life:

Every person is faced with decision making situations or problem solving situations or questions. These may either be abstract, cognitive or real. They may be mental or physical or both. However, because of one's experience or acquired knowledge, which is an accumulation of information with specific application, some of these situational problems, decision making processes or questions become 'normal'. In other words, a person would either have developed ready solutions to such 'normal problems' or have ideas as to how to solve or seek assistance or solutions to such 'problems' (Kaniki, 2001, p. 191).

There are, however, several situations or instances in which a person or groups of persons encounter problems, decision-making and, or, question answering situations but do not have ready “solutions” for them: “In other words the person or community experiences or develops a gap, or is in a state of lacking some commodity, which must be filled” (Kaniki, 2001, p. 191). The process of seeking information and the degree to which the seeker satisfies the need depends upon the level of information literacy or information seeking, searching and use, knowledge and skills an individual possesses (Kaniki, 2001, pp. 191-2). In earlier studies, Faibisoff & Ely (1979) and Krikelas (1983) drew on a psychological explanation to describe a state of information need. Kaniki (2001, p. 192) explains: “This state of uncertainty requires information as a stimulus to create a change in one’s level or degree of uncertainty”. He defines information need as “the state of lack of a desirable requisite or commodity (namely information) necessary to deal with a situation, as an individual (or as a member of a given community) sees fit”. In order to meet such information need, the level and nature of uncertainty needs to be assessed. This assessment requires information literacy on the part of the information seeker and skill from the information professional. The appropriateness of the information provided in response to a need depends on the extent to which it resolves the given need and here the seeker is the judge.

A need for information can be recognised or unrecognised, expressed or unexpressed. Some information needs may be recognised by the information seeker him/herself or by the information expert in engaging with the seeker. The former and the latter may have to “work together towards ‘disentangling’ and establishing the actual need” (Kaniki, 2001, p. 192). In some cases the problem is accepted as a normal part of life and no remedy is sought (Fairer-Wessels, 1990). This might well apply to those learners in the Emzameni study who were unable to articulate a problem or who did not try to resolve an identified problem. Very little research has been done on the information needs of, and access to information for, high school learners, particularly in rural and quasi rural situations.

In 1994, from her Johannesburg base Millward identified various areas of information need for South African youth living in the then townships. These were careers, youth rights, child abuse, rape and money matters, sex, family life, HIV/AIDS, academic stress, health, fashion and drugs as priorities with violence, discrimination, religion, peer pressure, alcohol and homosexuality scoring lower.

In 2000 Rubushe reported on a survey of 117 Grade 11 learners from five high schools in Mdantsane, Eastern Cape. Drawn using a stratified random sample, the learners in Rubushe’s study required information for self-education, reaching a decision and solving problems. They were less aware of issues such as HIV/AIDS, sex, drugs and alcohol than the literature suggested. Informal sources such as parents and friends were used to access information as well as teachers, books, newspapers and magazines (Rubushe, 2000).

A 2002 survey of user and non-users carried out for Ethekewini Municipal Libraries by Urban Econ used individual and household surveys and focus group discussions to capture data. This report suggests that the following topics should be included in the book stock for youth: anger, anxiety, grieving, stigma, controlling stress, health risks, death, failure, self-esteem, tolerance, gangs, being a runaway, discrimination and bias incidents, cross cultural and interracial relationships, sexuality and sexual identity, date rape and sexual abuse, dysfunctional families and family violence, suicide and drugs. Some findings from this research are discussed below (Ethekewini Municipal Libraries, 2002, pp. 23-24).

Research Methodology And Procedures: The Information Needs Assessment Survey

This section reports on the research methodology used and sketches the procedures involved.

The critical incident or anomalous state of knowledge (ASK) approach

Information needs have been seen to be embedded in behaviour or patterns of seeking and using information, hence the study of information seeking behaviour and information. One of the techniques which have been developed is the “anomalous state of knowledge approach” (ASK) approach (Kaniki, 2001, p. 195). This is a qualitative approach which examines how people or communities seek information concerning situations about which their knowledge is incomplete. Fisher & Oulton (1999, p. 116) point out that this approach has been used in a number of instances in library and information management but that current knowledge of the method and its potential applications seem more

limited than the method deserves, particularly in Britain. Insight into the information needs of the population of learners in this study was gained from a survey using the critical incident or ASK approach (Kaniki, 2001, p. 195).

The use of the critical incident approach in library use studies is a way of focusing the respondent's mind and of providing data on a specific occurrence. It is hence a more useful approach than seeking generalised accounts of library use (Fisher & Oulton, 1999, p. 117). The critical situations may be problem situations, decision-making or question answering situations. Respondents are asked why and how they seek information and through this process various common situations or the critical tasks of a community are identified. The initial questions are broad to enable the respondent's unprompted selection of a particular area of need. For this reason some of the information seeking situations described below appear as general rather than immediately information related in the first instance.

The ASK approach was used in the study to enable the identification of areas of concern to the learners, that is their critical information seeking situations. Through the use of content analysis the critical instances or situations were grouped together and quantified and thus measured to determine their levels of significance within the limitations of the study. Criticism of the ASK approach revolves around its dependence on the respondent's ability to remember the critical instances, however, as Kaniki (2001, p. 195) argues, people will often remember what they consider to be critical to them. He raises a second criticism that the ASK approach does not follow up on the use made of the information obtained. The best way to assess the information required and the value of the information provided is by measuring use made of the information and the impact made by its provision (Blom, 1983; Kaniki, 2001). The current study, as an exploratory one, did not assess impact. Respondents were asked, however, about the extent to which they were satisfied with the result of the information seeking behaviour.

Research procedures

During April 2001 and March 2002 the survey was carried out in two phases with the learners of Emzawweni High School and with the help of school and community representatives. An interview schedule based on that designed by Kaniki (1995) and used in a study of two South African rural areas, was adapted for this purpose. Two types of questions were used, structured pre-coded questions and open questions that required content analysis. For the data collection staff and students travelled to Emzawweni High School, where the students conducted face-to-face interviews with a stratified sample of learners.

In 2001 fifteen students conducted interviews with 244 learners drawn from grades 8 to 12. The interviews, mainly in English, with the grade 8s and 9s were not as productive as they should have been so in 2002 only grades 10 to 11 were interviewed. These interviews were conducted by a smaller class of six students with 72 learners, yielding an overall sample of 316 of a total population of approximately 700 learners in the school, that is a sample of 45% of the population. Equal numbers of boys and girls were drawn from the classes targeted.

Students spent about ten minutes interviewing each learner assigned to them. As the data collection fell on a day for speaking English and as the School was keen to have this medium used, the interviews were conducted in English much against the better judgement of the authors. Zulu is the home language of the learners. When language problems occurred particularly with the younger learners, the students used Zulu. Translation into Zulu was provided for foreign students by the community representatives.

Using the critical incident technique, the interviewer asked learners to identify a recently experienced problem or information-seeking situation or critical incident. These are reported on in Table 1. They were also asked about the information channels which they had used in resolving the problem (see Table 2) and whether or not they were happy or satisfied with the outcome of this information seeking exercise.

The students analysed the data using content analysis for the open questions and then descriptive statistics in terms of calculating frequencies and percentages. They wrote a report outlining the research process, interpreting the results and providing conclusions and recommendations. This report brings together the findings of these reports from the two phases. In the second year a reflection paper was introduced to capture the students' personal responses to their experience of doing the research and these papers provided interesting insights into their learning processes.

The Learners And Their Information Needs

The learners ranged in age from 12 to 25. The older than usual school-going age of the learners in upper age groups is explained by the exclusion of learners from school during the struggle years and the need to accommodate them at the present time.

The learners' critical incidents or information seeking situations were as follows. There were 31 learners who could not give an instance of a problem situation. This could possibly relate to a situation identified by Fairer-Wessels (1990) in a study of urban black women in Mamelodi in the then apartheid South Africa. The situation of not taking action in response to needs, according to Fairer-Wessels (1990, p. 363), is because the need has become "so entwined" with daily life that the respondents do not experience it as a problem. While the illiterate women in her study were seen as being especially likely to just live with the situation, Fairer-Wessels argues that the urban black women generally were unaware of their needs and did not articulate them. They did not see the problems as anything that could be solved because they had not learnt to identify problems, search for alternative solutions and attempt to solve them. They merely lived with, and experienced, the situation. One such respondent is reported on by Madlala (2002a, p. 10) from the class of 2002. The learner reported a problem at home in that;

she was required to do all the house chores after school and ended up having little time to study. The environment at home was not conducive to her studying and she was doing her Matriculation. She was worried that she would fail her Matriculation if things continued in this way. She had not tried to seek help and share her problem with friends as they seemed to be having the same problem.

Such respondents would fall into Kaniki's (2001, p. 192) category of those who encounter problems but are not sufficiently information literate to address them. They experience a state of lacking information but are unable to propel themselves towards finding a solution. Neither do they have ready access to information intermediaries who could assist in addressing the lack of information.

On the other hand some of these respondents were drawn from the Grade 8 and 9s surveyed in 2001 who had experienced problems with communicating in English.

Table 1: The learners information seeking situations N= 316

Situation	Number	Percentage
Access to information (library inadequate)	76	24
Difficulties with school subjects	56	18
Abuse	24	8
Financial problems	20	6
Crime (including rape)	17	5
Inadequate facilities (laboratory, sports, telephone, electricity)	13	4
Violence (including corporal punishment and witchcraft)	12	4
Unemployment (parents)	11	3
Intimidation/bullying/peer pressure	11	3
Health problems	6	2
Inadequate or no computer skills	5	2
School dirty	5	2
Coping with death	5	2
HIV/AIDS	5	2
Substance abuse	4	1
Communication with parents and teachers	3	1
Parenting poor	3	1
Domestic chores	3	1
Lateness for school	2	1
Harmful gossip	2	1
Environmental problems	1	0
Abusive language on TV	1	0
Total	285	90

The high number of learners raising access to information as their critical situation could partly be explained by their possibly being cued by the nature of the survey to raise such information issues. Many, however, gave examples of visiting the library in the city centre and this need relates to the next highest scored concern about difficulty with school subjects. While the Urban Econ survey was based in the Ethekeweni Metropole and hence in an area very different from that of Emzawweni, among the users of 13 years and older, school projects scored highest among the items of most commonly required information, thus echoing the top areas of need in the Emzawweni survey (Ethekeweni Municipal Libraries, 2002, p. 50). The needs reflected in this Emzawweni survey confirm the areas identified as being of key interest to the youth by the Ethekeweni report in spite of the differences between the urban and rural settings. This echoes Lund's observation (1998, p. 8) that the urban-rural dichotomy is less helpful with regard to characterising poverty as vast informal settlements mushroom around major cities and inner city areas are now characterised by deep poverty, as are the peri-urban settlements that surround many cities.

Several of the Emzawweni learners' concerns could be seen as linked, such as the unemployment of parents and the burden of domestic work, that hampered school work. Unemployment and the legacy of violence in the area relate to intimidation and bullying in the school and to perceptions of crime being a problem. The students were especially concerned that the learners had had little or no access to counselling to assist them in coming to terms with their experiences of violence.

Information channels used

The information channels used by the learners to seek information were as follows. More than one channel might have been used, hence although there were 37 non-responses, there were 285 instances of various channels being used. None of the respondents mentions using a library although some have used the type of material supplied by libraries. Myende (2002, p. 14), an alumnus of the school, now revisiting it as a university student, offers some insight into the non-use of libraries with comments on his attitude as a learner:

In my mind libraries were for those special people, not for me, and the fact that there was no one library around, the appetite for using it was not stimulated.

Table 2: Information channels used N=285

Channel	Number	Percentage
Teacher	72	25
Radio and television	57	20
Friend or neighbour	47	17
Relative	43	15
Newspapers	26	9
Books	15	5
Ward Councillor	10	4
Church, Women's or HIV Awareness Group	7	3
Own experience	3	1
Police	2	1
Religious leader	2	1
Doctor	1	0
Total	285	100

Groups, such as the HIV/AIDS awareness group operating at the School, had been used by seven (3%) learners. A high proportion of the learners 183 (64%) had used interpersonal sources. Teachers were top at 72 (25%) and were thus significant sources of information for the learners. Other interpersonal sources such as friends, neighbours and relatives followed. Personal contacts are an important source of information for information seekers from many occupational groups and this includes learners. Lamoral (2001, p. 184) in an audit of the sources favoured by well-educated users of the Institute for Commercial Forestry Research (ICFR) Library attached to the University of Natal, Pietermaritzburg-Msunduzi, found that personal contacts ranked as the second preferred information source. Lamoral comments in a way that is useful in planning services to learners, too, that this preference indicates the need to personalise the information services provided. She quotes Maguire & Kench (1981 in Lamoral, 2001, p. 184) who state that "the preferred means of receiving information is person to person".

Forbes (1999) in a study of the information needs of domestic workers in Clarendon, Pietermaritzburg-Msunduzi, found that the most heavily used information channel was also personal communication with relatives, friends, employers, co-workers and the police serving as sources. These workers sought information from the providers they knew best whether or not these were the best source of information. Fairer-Wessels (1990, p. 365) points out the inadequacy of personal sources and the need for information outlets that are accessible and adequate.

What seems to be crucial is that personal sources are a favoured information channel even when access to a range of sources is available. If, however, personal sources are used it is important that the source or person has expertise in the relevant area as in the case of the ICFR clientele. In the situations of the poorly educated women cited in Fairer-Wessels's study this did not appear to be the case. In the case of the Emzameni High School learners the teachers were likely to be an adequate source of information but their skills in the more problematic areas such as counseling about violence, rape and abuse would need to be augmented by reference to professionals in fields such as psychology, health and law. The learners in the current study, while enjoying a higher level of education, did not appear to have ready

access to expert sources or did not use them. Myende (2002, p. 12) explains: "The families themselves do not have the knowledge to help themselves in getting information that could be useful to them so that they can help their children".

Another 57 (20%) used the mass media with radio scoring highest here. Newspapers featured at 26.9%. A free weekly supplement to the daily *Natal Witness* called *Echo*, was available but was possibly difficult to access from the School. Surprisingly, given the circumstances, 15 respondents (5%) had used books.

Three had relied on their own experience. Civic figures such as the Ward Councillor rated 10 (4%). Religious leaders featured at the low level of two (1%).

Levels of satisfaction with the outcome of seeking information

The learners were asked about their levels of satisfaction or lack thereof with the outcome of the information seeking. For the 221 who responded, the responses were fairly evenly spread between those who were satisfied 115 (52%) and those who were not 106 (48%).

Some of those who were satisfied were reported on as follows:

A male learner had no one to pay his school fees as both parents were unemployed. He talked to a male teacher about his problem and the teachers found him a temporary job. Every Saturday he works as a gardener to pay his fees. He reported that the help he got from the teacher was a 'great help' and he 'learned a lot from the teacher' (Madlala, 2002a, pp. 10-11).

Another male learner had a problem with his class teachers so;

he joined a group of gangsters, one of whom was a boy from the same school who was against the teacher on the grounds that the teacher was strict. He later changed his mind and decided to speak to the teacher and apologise after being advised by another teachers at the school (Madlala, 2002a, pp.10-11).

Some of the dissatisfied learners were reported on as follows:

A grade 11 learner complained that he had repeated this grade for the third time. He had tried to get help from his mother but she did not know what to do (Madlala, 2002a, pp. 10-12).

Another had a problem in that:

The books he wanted to read were written in English in difficult vocabulary, for instance, a book on children's rights. He had tried to get help from television programmes but did not get sufficient help (Madlala, 2002a, pp. 10-2).

Nearly half the learners were not satisfied with the outcome of their information seeking and this is a major cause of concern in situations as serious as those reported, involving abuse and intimidation. The use of interpersonal sources of information requires further study. Myende's comments (2002, p. 13) on the learners reveal the critical nature of the situation: "Some of them are gradually giving up on living, they believe that life is not for them. They feel no need to live".

Conclusions And Recommendations

The PGDIS students recognised the urgent need for counselling and with staff liaised with the CHESP partners from the School of Psychology on the local campus about these concerns, particularly about the incidence of rape and the inability of learners to achieve closure about their own part in the political violence in the area. Support Centres staffed by paralegals from the University of Natal's Centre for Criminal Justice are available at centres as nearby as Taylor's Halt and Plessislaer to provide legal advice and referral to experts in the city. Madlala (2002b, p. 2) comments: "I think psychologists and social workers are needed to help the learners get counselled and get people who can understand their problems and spend some time with them to build a certain communication between the child and the parent".

An obvious need is for library provision at the school. The existing facility had been improved by volunteers connected to the Information Studies Programme some years earlier but had again fallen into disrepair. The staff member responsible for the library, while she had some school library training, seemed unequal to the task and also lived many kilometres away in Ethekwini. The provision of electricity to the school by April 2002 widened the range of options possible in a future improved facility. Ideally the school library should be linked to Information and Communication Technology initiatives planned for the area. These are the Super Centres Telkom Project and the Thintana Computers In Schools Project. Emzamweni is being considered for the Thintana Project which puts 15 computers in a school, fully connected and electronic-mail for every student and staff member as well as Internet access (Du Toit, 2001). Sustained intervention by a service provider is, however, required to maintain and upgrade the facility. The learners recognise the need for a library and are highly likely to be motivated users.

In consultation with Masters students from Psychology the students designed and produced career information pamphlets for the learners focussing on the areas they had requested information about. These were intended to inform choices about future career options. With colleagues from the University's Main Library in Pietermaritzburg they produced visual display material around the theme of library literacy for Careers Day held by the School of Psychology staff at the School.

Concerning the success of this part of the CHESP initiative as a learning model, comment from student reflection papers are critical but generally positive.

Nene (2002, p. 1) from the class of 2002 wrote:

Although this was supposed to be just a study for me it was an eye-opening experience. I was deeply touched by a particular learner who had no employed people at home so he has never paid school fees and relies on neighbours, friends and relatives for food. He was so eager to get an education despite his circumstances ...

Miya (2002, p. 1) commented that one respondent had come to Emzamweni to get away from a drug habit which had led him to use cocaine. At Emzamweni learners were more likely to abuse alcohol and dagga than harder drugs. Miya attributed this substance abuse to learners being unable to solve their problems and lacking the information necessary to do so. In spite of this worrying revelation for Miya this experience was "exciting because it was my first opportunity to conduct a survey, interviewing learners, and gathering and classifying the critical incidents experienced by the learners".

Finally, in contrast to the impression given by Myende (2002) above, another facet of this complex situation is revealed by Landsberg (2001, pp. 8-9) from the class of 2001. She comments:

I was most impressed with the learners' zest for life. It was an eye-opener to see the learners in a disadvantaged school so content with the little they had. I walked around the school during the lunch break and visited a classroom which had murals and posters on the walls highlighting Aids awareness. There were vegetable and flower gardens in the grounds of the school and the learners were happily weeding the gardens. My memories of Emzamweni High School will be the positive attitude, the laughter and the voices of learners during their choir practice.

In conclusion, within the limitations of this being a training exercise using student researchers and the difficulties of collating data from a variety of student reports, the study was successful for what it revealed about the needs of this group of learners. To the authors' knowledge no similar studies exist in the province. As a result of the substantial stratified sample the findings can be generalised to other similar situation but the limitations of this research as a teaching exercise with results based on the experimental work should be recognised. The last word goes to Zuma (2002, p. 2) from the class of 2002:

I would like to see a bigger study being conducted to assess the needs of these learners, when more time will be allocated and one can expect a bigger picture of the problem situations of these learners. But I don't undermine this study we conducted - it did serve its purpose.

Acknowledgements

This paper brings together the information needs assessment reports of the Class of 2001: Goitsewang Gladness Isaac, Annette Landsberg, Refilwe Cynthia Masondo, Eng Sealogane Mpotokwane, Bridget Smangele Mpungose, Nontokoza Myende, Nompumelelo Hazel Ndlovu, Sibongile Nene, Lefuma Evodia Sejane, Thobile Rosemary Sithole, Maxwell March Teputepu, Ntombifuthi Doris Vezi, Lilian Nomusa Zuma, Simangele Deborah Zuma and Bongekile Goodness Zwane, and the Class of 2002: Monica Nonkululeko Madlala, Raphael Zethembe Miya, Zibuse Myende, Jabulile Laughday Elizabeth Nene, Fiona Margaret Polak, and Mzomuhle Jeffrey Zuma.

It is dedicated to the memory of Bongekile Goodness Zwane and Maxwell March Teputepu, Class of 2001, whose lives so full of promise, have already tragically ended.

References

- Bawden, R. (1999). The community challenge: the learning response. Paper presented to CHESP Leadership Capacity Building Programme Seminar, Cape Town, December.
- Becker, N. J. (2000). Service learning in the new curriculum: preparing LIS students for the next millenium. *Journal of Education for Library and Information Science*, 41(4), 85-93.
- Blom, A. (1983). The task performance of the scientist and how it affects an information service. *Mousaion*, Series III 1(1), 3-43.
- Boyer, E. (1996). The scholarship of engagement. *Journal of Public Service Outreach*, 1 (11), 11- 20.
- Brookes, E.H. & Webb, C. de B. (1965). *A history of Natal*. Pietermaritzburg: University of Natal Press.
- De la Pena McCook, K. (2000). Reconnecting library education and the mission of community. *Library Journal*, 125 (14), 164-65.
- Dervin, B. (1980). Information as a user construct: the relevance of perceived information to synthesis and interpretation. In S.A. Ward & L.J. Reed (Eds), *Knowledge, structure and use* (pp. 155-83). Philadelphia, Temple University Press.
- Du Toit, M. 2001. E-mail letter concerning ICT possibilities in the Inadi area. Pietermaritzburg, April.
- Ethekweni Municipal Library Services. (2002). *User and non-user survey*. Ethekweni: Urban-Econ.
- Faibisoff, S. & Ely, D.S.(1979). Information and information needs. In D.W. King (Ed), *Key papers in the design and evaluation of information systems* (pp. 270-84). New York: Knowledge Industry.

- Fairer-Wessels, F. (1990). Basic community needs of urban black women in Mamelodi, Pretoria, South Africa. *South African Journal of Library and Information Science*, 58(4), 359-69.
- Fisher, S. & Oulton, T. (1999). The critical incident technique in library and information management research. *Education for Information*, 17, 113-25.
- Forbes, C. (1999). The information needs of domestic workers employed in Clarendon, Pietermaritzburg: an assessment. *Innovation: a Journal of Appropriate Librarianship*, 19, 8-17.
- Hart, G. (2002). The African Renaissance and children's literature: is South African librarianship abdicating its role? *South African Journal of Libraries and Information Science*, 68(1), 29-38.
- Kaniki, A-M. (1995). Exploratory study of information needs in the Kwa-Nganase (Natal) and Qumbu (Transkei) communities of South Africa. *South African Journal of Library and Information Science*, 63 (1), 9-17.
- Kaniki, A-M. (2001). Community profiling and needs assessment. In C. Stilwell, A. Leach & S. Burton (Eds), *Knowledge, information and development: an African perspective* (pp.187-99). Pietermaritzburg: School of Human and Social Studies, University of Natal.
- Krikelas, J. (1983). Information seeking behavior: patterns and concepts. *Drexel Library Quarterly*, 19 (Spring), 5-20.
- Lamoral, D. (2001). An evaluation of information provision at the Institute for Commercial Forestry Research, South Africa: the findings of an information audit. *Journal of Librarianship*, 33(4), 177-90.
- Landsberg, A. (2001). An investigation of the information needs of the learners at Emzameni High School, Inadi, Pietermaritzburg. Unpublished PGDIS paper. Pietermaritzburg: University of Natal, School of Human and Social Studies.
- Lund, F. (1998). *Who's in and who's out: the effects of poverty and inequality on participatory and institutional development*. Durban: Olive. Avocado Series No. 2.
- Madlala, M. (2002a). An investigation into the feasibility of establishing an information support strategy for Emzameni High School in the Inadi Community. Unpublished PGDIS paper. Pietermaritzburg: University of Natal, School of Human and Social Studies.
- Madlala, M. (2002b). Reflection paper on the information needs assessment. Unpublished PGDIS paper. Pietermaritzburg: University of Natal, School of Human and Social Studies.
- Millward, J. (1994). Young adult library services in Johannesburg: addressing the needs of teenagers in a multi-cultural society in transition. *International Review of Children's Literature and Librarianship* 9 (2): 57-72.
- Miya, R. (2002). Reflection paper on the information needs assessment. Unpublished PGDIS paper. Pietermaritzburg: University of Natal, School of Human and Social Studies.
- Myende, Z. (2002). Information needs of High School Learners at the Emzameni High School, Inadi, KwaZulu-Natal. Unpublished PGDIS paper. Pietermaritzburg: University of Natal, School of Human and Social Studies .
- Nene, J. (2002). Reflection paper on the information needs assessment. Unpublished PGDIS paper. Pietermaritzburg: University of Natal, School of Human and Social Studies .
- Nuttall, T. (2001). Moving community-based learning into the mainstream university curriculum: South African opportunities and challenges. Paper presented to the Social Science Curriculum Reform Conference, Ford Foundation Social Sciences Project, Pretoria, 26 September.

Polak, F. (2002). An exploratory study of the information needs of High School Learners at the Emzaweni High School, Inadi, KwaZulu-Natal. Unpublished PGDIS paper. Pietermaritzburg: University of Natal, School of Human and Social Studies .

Rubushe, B. (2000). An exploratory study of the information needs of secondary school students in Mdantsane Township, Eastern Cape. Masters in Information Studies thesis. Pietermaritzburg: University of Natal.

Zuma, M.J. (2002). Reflection paper on the information needs assessment. Unpublished PGDIS paper. Pietermaritzburg: University of Natal, School of Human and Social Studies.

Biographical Notes

Christine Stilwell is Professor and Director of Discipline and Fiona Bell, Lecturer in Information Studies, School of Human and Social Studies, University of Natal, Private Bag XO1, Scottsville, Pietermaritzburg. Stilwell researches, supervises research and lectures in the area of information needs assessment and co-ordinates the Doctoral Programme in Information Studies. She co-edited the book *Knowledge, information and development: an African perspective*. Email stilwell@nu.ac.za

Fiona Bell co-ordinates the Post Graduate Diploma in Information Studies and in this capacity has participated in and given papers about community based learning. Her fields of expertise are cataloguing, classification and reference work, traditional and online. She researches in education and training for Library and Information Studies and supervises research in this area. Email: bellf@nu.ac.za

Peter Tsikudhu

Librarian

Emang Basadi Women's Association

Gaborone

Botswana

School Libraries are not value free or neutral, they cannot be assumed to be collecting information sources free from gender stereotyping. They are characterized by clear set goals, values and mission statements. Knowledge is a social construct and therefore reflects dominant social, economic and social order. In the new millennium social, educational and economic institutions have pledged to remove all forms of prejudice based on gender.

The paper seeks to explore the role of school libraries in challenging gender stereotyping concepts. The purpose of the paper is to identify issues and suggest how school libraries can shift the paradigm. It also shows how and why the library and information systems are silent on gender issues.

Introduction

The school library is not just a place for reading but it also contains ideas that can empower the students or disempower them. It has a capacity to influence the minds of the students and as well as shaping their world outlook. Recently gender issues have become imperative not side issues as it was in the past. Therefore, as our societies increasingly become gender inclusive every learning institute has to mainstream gender issues. Gender here is construed as referring to relations between males and females and how the relationship is socially constructed. These relations change from society to society as it may be determined by changes in historical, cultural, social, economic as well as political environment. Gender ideology may affect information provision and distribution. Social science and Feminist research and scholarship has broadened the discourse on the relationship between gender and information and knowledge (Harding, 1991; Freira, 1970; Lloyd, 1989; Tanesini, 1999). In addition as information is increasingly playing a major role in human development, there is a need as well to move towards more gendered approaches to understanding gender and information.

Why gender and information? School Libraries are not value free or neutral, as such they cannot be assumed to be stocking information sources free from gender stereotyping. Because they are characterized by existence of clear set goals, values and a mission statement. School Libraries are sources of information and knowledge to the students. Knowledge and information carried in libraries is a social construct and therefore reflect the dominant social, economic and social order. In the new millennium the social, educational and economic institutions have pledged to remove all forms of prejudice based on gender or sex in development programme and all activities that promote gender equality, and these included social and educational institutions.

The traditional approach to librarianship and related research has been andocentric in focus, where by the male and male world-outlook/view is considered the norm, and the female becomes the aberration with the associated physically based deficiencies. School libraries are also integral to the school curriculum and as such they are at the heart of changing the student perspective and perceptions about gender issues and relations.

The Context: Information, Knowledge and Gender

In order to comprehend the relations between libraries as information transmitters and the influence it exerts on the students, we must then begin by considering the contribution of men and women in relation to knowledge construction, processing and dissemination. Historically the knowledge production has always reflected the dominant class. In addition knowledge is the outcome of societies gendered practices. Therefore knowledge construction is a gendered practice (Code, 1989). Consequently knowledge is a social construction. Historically men have dominated the production, development and the exploitation of knowledge and information. Knowledge is power and this is not just a cliché but also a reality. Best & Keller (1991) in their critical examination of post modernism argue that power operates as a factor of hegemony of norms and at the same time greatly shapes the construction of knowledge. Similarly in *The End of Innocence* Jane Flux concludes “ at its best, postmodernism invites us to engage in a continual process of disillusionment with the grandiose fantasies that have brought us to the brink of annihilation” (Flax, 1992, p.460). By extension she recognises that traditionally gendered identities and life courses do influence knowledge production. Gender stereotypes have indeed led to the annihilation of alternatives.

However, probing gender issues in school libraries, one is met by norms that have been dictated by sources of knowledge. Sources of knowledge and information are therefore not neutral; rather they reflect certain ideologies and practices. Certain sources of information in libraries are bound to reflect certain values over others. Information sources and resources have a purpose to fulfil and expectations to satisfy. To demonstrate this let us focus on positivist thinkers like Plato, Socrates and Aristotle (Aristotle, 1941) to mention a few. Such philosophers' construction of knowledge shows some bias that later also shaped world reality about men and women. Such knowledge has been passed from one generation to the next. Consequently, information and knowledge cannot be understood in isolation from the social context in which it emerges. This paradigm has defined gender and knowledge. Libraries have accepted such a paradigm over time without questioning it, hence losing the focus. The ideological framework of information provision in school libraries is erected upon a fallacy that there are “good sources” of information for students. Who judges that it is not good? The judgement is taken by adults who themselves are not neutral in their judgements. Cross (1991) commenting on juvenile literature asserts that adults write books found in libraries. Hence their information and knowledge they contain also contains the opinions, influence and beliefs. The adult world is characterised by gender identities either intended or accidental.

Acquisition/ Collection Models and Gender Issues

Central to the process of selection and acquisition within librarianship is the idea of a “balanced collection” and largely supported and fed by theories of acquisition and selection. By and large the process of selection is fed by the notion of objectivity. This framework and discourse had over years become the privileged. In a school set-up information and knowledge that are characterised as “good and suitable” get privileged over others. Weissbord and Mc Greal (1990) observed that the selection policy can create a biased literary selection in a library through the systematic addition of books containing a particular ideological perspective. Consider for instance the situated knowledge. Librarians have been trained in the management of information as well as principles of selection. Additionally this paper sees the role of librarians as inherently political. Nevertheless, librarians operating under the notion of objectivity and professionalism have uncritically rejected the political nature of their work. In these times of increased value of information, information overload and information superhighway, librarians have sought to play leading roles in the information and open society. In order to do so, they have uncritically accepted the ideals of professionalisation and have embraced the principles of objectivity and neutrality (Iverson, 1999). This paper, in examining the issue of objectivity closely, senses a danger of uncritically adopting the stance of objectivity as leading to the notion that knowledge and information are value free. Blake warns that “librarianship’s reluctance to define its values in political terms and to cultivate a sense of social responsibility may allow it to drift into uncritical accommodation with society’s dominant and political and economic powers” (Blake, 1989, p.39). Paradoxically, librarians while expected to be objective are also tasked with making decisions regarding the so-called “good” and “bad” materials. Librarians are looked at as experts in determining literature and other information resources and sources that students need.

Therefore, I submit that by not questioning the models of acquisition and selection, librarians are entrenching stereotypes and encouraging illusions. Any writer writes from an ideological and contextual standpoint. Knowledge and Information as documented in whatever format are a reflection of the ideas and theories of human beings that are by nature inventions. Therefore, stories and theories are built with human minds. It goes without saying that such inventions depend on human thinking, decision-making as well as reasoning. Put another way, constructed knowledge conveys some information about the cognitive and moral experiences of the creator of the knowledge (Code, 1989). Consequently to emphasise much on balanced and objective selection over other alternatives leads to illusion. In practice, Harvey (1988) argues that in emphasising a balanced and objective approach, the selection process is silencing the situated knowledge. While advocating for balanced selection of materials, librarians have continually remained silent about situated knowledge and alternative selection models in school libraries.

Adding to the notion of balanced collection is the school curriculum, that to some extent influences what the students learn and the pedagogy of learning. By and large the school curriculum is the basis for what the student deems as fit to be learned within a school framework. The curriculum promotes the myth of objectivity. This paper sees the school curriculum as an extension of hierarchical and positivist orderings of what can count as knowledge. By determining what goes into school library collection and what does not go in, librarians serve these same hierarchical and positivist orders. This paper argues instead that the conventional understanding of what is considered as objective need to be replaced by an alternative understanding of objectivity. The doctrine of objectivity must embrace and accommodate paradoxical, critical and concrete knowledge. We can see from one perspective all of individuals, each communities and our own particular views that are by and large shaped by our own identities, cultures, ideologies and socio-economic environment.

In organising materials in libraries, librarians use specified standards of cataloguing and classification as outlined in the Dewey Decimal Classification System. The Dewey Decimal Classification (DDC) system by nature spreads the material all over by assigning them different notation (s). So the subject may be assigned different notions. This in practice creates difficulty in students. DDC misplaces some materials and impacts on easy access, especially for the young who does not have adequate and sufficient information literacy skills. The catalogue is rarely consulted; instead students approach the library with common sense of what they know it to be.

Research shows that students have different abilities in searching for information. We may find gender issues in access to resources placed in development economics or poverty, rather than under the general subject of gender. If we take the concept of access to information and knowledge as essential, then we must be concerned with scattering subjects all over the classification scheme. The school is an extension of the informal institution such as the home and has social embeddings that influence student's gender perceptions. It is important to note that students learn in different ways. It is therefore, quite necessary to group gender materials under one consolidated subject rather to scatter them in accordance with a classification scheme. The concern is not merely a question of how would a "women topic" be handled, but also whether the whole approach is likely to exclude, devalue, misconstrue and fragment certain kinds of knowledge and of users (Pritchard, 1994). The expectations that the students bring to contact with information resources and sources are also to some extent conditioned by the wider social situations which they are imbibed social knowledge web. Ostensibly, school library systems are built and established on the basic belief of access to information. Should we argue then that the establishment of school libraries was not connected to the idea of providing all types of information as well as supporting an open and equal society, rather it was established to provide "good knowledge"? It appears that many school establishments do not want to revert to alternatives of information provision. Additionally librarians need to think about the materials they receive in school libraries. Nevertheless, we need to ask the question what can school libraries do?

How can school libraries contribute to the gender equality struggle?

Over years of development of school libraries so much has been achieved i.e. standards, collections and acquisitions policies, staffing and financing as well as making libraries part of school curriculum, etc. However, by and large gender issues have remained an "optional innovation". The dilemma is that there are so many questions to be explored. Given that there are no nationally driven efforts to infuse gender issues in collection and acquisition policies, how does gender go into school libraries? Who will lead the initiative and how will such issues be advocated? Under what

circumstances are gender issues marginalized in School libraries? Finally, what sustains absence of gender issues in school libraries despite the fact that gender nowadays is part of every public and intellectual discourse?

Gender issues, overtly or covertly, affect much of our existence. In respect to school libraries, one advantage that school libraries stand to benefit from is that today the emphasis is very much on learning rather than on teaching. This means students have to discover knowledge and information for themselves. There is a shift from teaching students to memorise facts to being taught how to learn. School libraries should make available sufficient and adequate gender information in all formats. The school library also needs to change its role. The school library can no longer play a neutral role in the instructional programme. In addition the conventional paradigm that a school library is simply a source of information must be replaced. The school library today should be seen as a place that can influence either positively or negatively student's perception, mind-sets, and world outlook. It is a place where especially in the contemporary societies where social changes occur and other ideas are developed. Hall (1986) argues that a school library must resemble a laboratory where students are linked with learning and resources for learning by focusing on the processes and content oriented to learning how to learn, and provides opportunities for students to become self directed and develop a commitment to lifelong learning. The emphasis is now on problem solving rather than on rote learning. In addition school libraries must teach students basic information literacy skills to enable them to access, analyse, select and communicate information. Changes in learning and the curriculum have brought new roles for school libraries. If libraries are to contribute towards building open societies, a new paradigm to offer information to students must be sought.

Gender is a particularly complex issue for school libraries to deal with because it has never been part of the librarianship lexicon, especially in developing countries. It disturbs the conventional library practitioners and individual schoolteachers by requiring them to examine their own professional and private practices, ideologies and cultures. Librarians have to acknowledge that they are part of the problem rather than the solution. They have continuously taken part in the recreation of gender differences over time. Skelton and Hanson (1989) observed that to address equality issues is not to deal with external exercises restricted to the realms of the professional or the academic; rather it involves a challenge on a personnel level. Confronting equality involves the individual in self-examination. This would require the school librarians and the entire professionals to change their assumptions and mind sets about the gender roles and as well as the changing roles of school libraries in the contemporary societies.

There is a need to change from the current DDC arrangement that essentially scatters aspects on one subject in to different locations e.g. aid has two major aspects such as social and health and of late gender. Under DDC all these aspects will be located in different notations. Making it difficult for some students to locate and even know such existence. Male students will always want information that will reflect their male outlook of the world and this makes gender issues even more invisible. The socially sanctioned gender role makes it difficult for students to identify gender issues that define the day-to-day relations. If gender equality had to move from rhetoric to practice then we need to re-think the way materials are organised in the library and the role of school libraries in the development of individual learners.

School media centres can play a role in bridging the gender gaps in knowledge and understanding of diversity. School media centres can launch library programmes for students which emphasise gender issues. For instance, inclusion of works in different formats about women's experiences can to some extent alleviate the problem. It should be realised that the problem lies with sidelining works that specifically express female experiences. This can be done in the form of a library project that introduces the students to gender issues in education. Then it can collect as much as possible materials on gender specifically collected by students themselves. The idea here is to avoid "a process of silencing other meanings" in which other ideologies and experiences are "buried, camouflaged and discredited" (Fine, 1987; 157). Fine reminds us that we also need to pay attention to those ways of knowing that have been historically and ideologically marginalised. Such an approach will offer students a critical and analytical thinking in relation to gender and gender discourse. Gender issues in this case would not be just another subject, but rather it would be a challenging issue to the students. A conducive environment should deliberately be created where students can analyse the intentions and ideas contained in the different sources of information, instead of such ideas being just planted in their minds. This could go a long way to challenge issues of language, sexism in writing as well as use of gender-biased language. The assimilated language creates images that inform the world outlook of young ones. Such a project shall be quite practical.

Language is one of the cultural tools used to communicate and make sense of experiences. Language also creates norms such as “socially accepted ways of portraying reality of thinking and of acting that can be used to identify oneself as a member of society or a network” (Fine, 1987; 170). The author here suggests to us that we should be looking out for factors that make issues of gender invisible in the documented knowledge.

Information in what ever format it may be collected, should reflect the worlds of both men and women, should reflect the ways in which both men and women think and ways of knowing of both social groups. It is the thinking of this paper that conservative and traditional philosophers thought they were engaged in objective knowledge construction. But increasingly public and intellectual discourse in both education and feminism reveals that there have been tendencies to polarise knowledge on the basis of gender. Reasoning through which information and knowledge was created led to the gendered practices that led to gender stereotypes. Now its time to deconstruct such images and replace them with situated knowledge.

The andocentric approach presumes that female and male students share homogeneous experiences of world of ideas. One consequences of this arrangement is that historically a gender issue has never been part of library education.

Conclusions

Given the different histories of different schools, the socio-historical context of each school, ideologies of individual teachers, management and the funder, it is not surprising that school libraries are at very different stages in handling of gender issues. There are still large numbers of schools where there is still very little understanding of issues involved hence missing the paradigm. The so-called objectivity and professionalism as well as subject teacher approach is underpinned by a number of assumptions about gender relations. School library theoreticians and practising librarians have tended to focus on their bit of the specified duties, and on those aspects of information provision which have been highlighted as a result of various research efforts; such as selection, acquisitions, balanced collections and “good collections”. It has been quite difficult for school librarians to critically understand various ways in which gender issues in schools library collections underwrite patterns of domination, submissions in interpersonal relations. Seen from one angle it should be easy to influence the whole school library selection and acquisition policy in that the evidence of gender inequality is so abundant. However, the difficulty is that librarians and teacher librarians are so passively accustomed to the conventional gender differentiations and inequality that they are treated as natural; what happens appears to have the sanction of natural law and can not be questioned any more or resisted than the law of gravity.

School libraries should be pro-active and not passive as they are now. Learning can be too personalised and individualised hence there is a need to make deliberate effort to initiate discussions of practical issues. In as much as the education is shifting from the teacher-centred to student centred approaches of learning – school libraries can also take the same approach. More so that gender issues-that self-image and perception of students are patterned around one’s gender. Consequently, male students have more positive images about themselves than females. Explicit presence of gender issues in school libraries can result in basic gender awareness, empowerment and social inclusion.

In every day life curriculum is prescriptive. There is substantial literature on acquisition theory in librarianship, which has not to date, been linked theoretically or through research for purposes of unravelling the complex web of relations that underpin questions about gender issues in school.

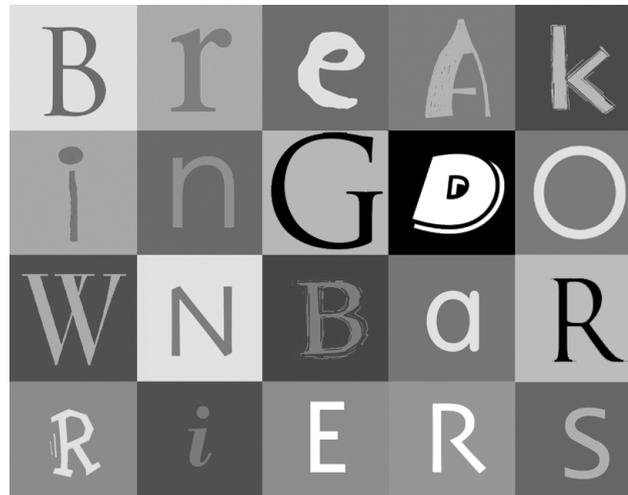
This paper further concludes that it is an illusion to think that the process of information dissemination is neutral and value free. Therefore, there is a need for librarians to move away from the traditional and conventional concept of a school library as a mere knowledge storehouse. This would enable the librarians to be more creative and use idea of a media centre to counter the reactionary curriculum. In addition, the school environment plays a role in gender stratification. Historical and current social attitudes continue to identify our world through a gender lens. It is here that once again we ask the question: has the paradigm been lost or found?

Reference

- Aristotle (1941). *The Basic Works of Aristotle*. New York. Random House.
- Blake, Henry T. (1989). Librarianship and Political Values: Neutrality or Commitment? In *Library Journal* (July), 39-43.
- Code, L. (1991). *What Can She Know? Feminist Theory and the Construction of Knowledge*. Ithaca: Cornell University Press.
- Code, L. (1998). Experiences, Knowledge and Responsibility. In Garry, A. and Pearsell, M. (1889). Women, Knowledge and Reality Explorations. In *Feminist Philosophy*. 157-172. London: Unwin Hyman.
- Cross, Gillian. (1991), Twenty Things I Don't Believe about Children's Books. In *School Librarian*, 39(2), 44-46.
- Fine, M. (1978). Silencing in Public Schools. In *Language Art*, 64, (2), 170.
- Flax, Jane (1992). The end of Innocence. In J.Butler and J.Scott (Eds.), *Feminists Theorise the Political*. Toronto: Rutledge.
- Freire, P. (1970). *Pedagogy of the Oppressed*. New York: The Continuum Publishing Company.
- Hall, Noelene, (1986). *Teacher, Information and School Libraries*. Paris: Unesco, (PGE-86/WS/17).
- Harding, S. (1991). *Whose Science? Whose Knowledge*. Ithaca: Cornell University Press.
- Iverson, Sandy (188/99). *Librarianship and Resistance*. In *Progressive Librarian*. Issue No.15.
- Lloyd, G. (1989). The Man of Reason. In Gary, A. and Pearsall, M. *Women, Knowledge and Reality: Explorations in Feminist Philosophy*. London: Unwin Hyman.
- Pritchard, S.M. (1994). Feminist Thinking and Librarianship in the 1990S: issues and Challenges. in *Library Bulletin*. 68, (10).
- Skelton, C and Hanson, J.(1989) Schooling the teachers: *Gender and Initial teacher education*. In S. Acker (Ed.) Teachers, Gender and Careers, Lewes Falmer Press.
- Tanesini, A. (1999). *An Introduction to Feminist Epistemologies*. Oxford: Blackwell Publishers.
- Weissbord, D and McGreal (1990). Moral Autonomy, Censorship, and the Enlightenment Community. In *Library Trends*, 39, (1&2), 545-572.

Biographical Note

Peter Tshukudu is a practicing Librarian with a Masters degree in Library and Information Studies. A Graduate of University of Botswana, Peter's interests are in Information Management, Political Economy of Information, Community Information, Human Rights and Democracy as well gender Information and Women's Information. Currently Peter works for Emang Basadi Women's Association Documentation, Information Resources Centre in Gaborone, Botswana. The Documentation, Information Resources Centre services members of the general public, researchers, academics, students etc. He also previously worked in school libraries. He is a member of Botswana Library Association (BLA). In addition, he has attended many professional seminars, conferences and workshops. In all these workshops he has made an attempt to present some papers. Peter's mission is to start publishing in professional journals.



Workshop Papers

New York City Partnerships: How Public Librarians and School Librarians Work Together in the CLASP Initiative

Sandra Kennedy Bright

Director, Office of School Library Services
New York City Department of Education
USA
and

Katherine Todd

CLASP Manager (Retired)
New York Public Library
USA

New York City by virtue of its size and its eight million residents is a wonderful microcosm of the world. There are many opportunities for professionals to try new and unique ways of working, because there is always someone with a great idea waiting to try their wings. The CLASP program identifies three C's for us to try on for size, Communication, Cooperation and Collaboration. This partnership in NYC was especially beneficial to children, parents and educators. CLASP successfully linked the importance of children's reading and access to materials to the mission of school and public library cooperation.

Introduction

New York City (NYC) with its eight million residents is surely a microcosm of the world at large. The statistics created by the vastness of the city and its population can be mind boggling and astounding. I'll save the major statistics for later. I'd like to begin with a few brief examples of school and public library collaboration that detail how NYC models behavior for other cities, towns and municipalities world-wide. These exemplify the variety of collaborative ways that NYC school and public libraries work together annually.

A Unique Opportunity for Collaboration

The idea of dazzling students with books about New York City was a new one. What a wonderful opportunity for cooperation! The idea was ingenious. Who would have thought of creating a bibliography of New York City books for New York City kids? Why of course, it was I!

I had felt for several years that there were so many great books about NYC or books that are set in NYC, or books by authors from NYC, that a definitive, well-organized, annotated bibliography would be a good thing for NYC kids. I mentioned my idea to a few school and public librarians and each thought "Oh, what a good idea!" but no one volunteered to organize the work. A few months passed and I got a phone call from Marilyn Ackerman, Children's Materials Selection Specialists for Brooklyn Public Library. She had heard about my idea and wanted to discuss it. Her first question was "How far along are you in selecting materials?" Well, in truth the idea was still a gem waiting to be more fully shaped and polished. Ms. Ackerman asked several questions and had many suggestions. One of her suggestions was that maybe she could organize a meeting of the three library systems, if I could suggest a few school librarians who would like participate. Then a discussion might begin. I had several school librarians to recommend and the first meeting for the NYC bibliography was arranged. Many concerns were expressed by committee members at the first meeting.

The results of that two-year collaboration were extremely exciting and satisfying. The committee created two annotated bibliographies: one for pre-kindergarten through 8th grade students and the second for 7th through 12th grade students. We agreed from the beginning on a few criteria:

- Only books owned by all three public library systems would be included on the lists,
- Books by NYC authors would be included only if the setting or plot were about NYC,
- Mature titles on the 7th through 12th grades list would be followed by an asterisk, and
- All titles had to still be in print.

The committee met in branch libraries across the city. The graphics department of Brooklyn Public Library did a marvelous job of designing and illustrating the two tri-fold lists. We now have two colorful, high-quality, professionally selected up-to-date annotated bibliographies that appeal to NYC educators and students from pre-kindergarten through the 12th grade. The bibliographies are widely distributed through NYC school library media centers and all 208 branches of the tri-library system. This is just one successful example of school and public library cooperation in NYC.

Annual Collaborative Projects

Professional development programs for school librarians are held annually in the spring and the fall semesters with the participation and input of the tri-library system professional staffs. Extensive planning takes place prior to all meetings. Annually the spring meetings are held in tri-library system branches in each of the five boroughs of NYC. The public library staffs share hosting the meetings and conferences, developing the agendas, and conducting workshops and presenting at these meetings. It is both a benefit and an advantage for the school and public library staffs to take every opportunity to meet and collaborate on professional development issues and concerns that impact the city's children.

The development of the summer reading lists and programs for NYC students is a joint project. The tri-library/school network meets at least four times annually to develop the children's and young adult lists with annotations using the New York State theme for summer reading. Un-graded summer lists are provided for special needs students annually and bilingual lists have been done in Spanish and Chinese. The theme for this year, 2003, is "Picture This, Imagine That."

The New York Public Library (NYPL) annually creates the "Books for the Teenage", a bibliography of over eight hundred titles for our young adults. The cover illustration is secured through a citywide art competition for NYC high school students. There were over 200 entries for cover art this year. The winning artwork becomes the cover illustration, and the runner up artwork is displayed in the expansive picture window of the NYPL, Donnell Library Center for the entire city to view. The unveiling of the artwork and bibliography was scheduled for March 2003.

The Annual Citywide Storytelling Festival of the Division of Instructional Support, Office of School Library Services, has had its borough finals in branches of the tri-library system for over 18. Many of the judges are children's and young adult librarians from the tri-library system.

Training teachers to Bridge the Digital Divide was another unique program designed to provide collaboration between the school community and New York Public Library. Training teachers is like planting seeds. A classroom teacher reaches 30 students this year, 30 students next year and 30 students the following year. The knowledge that a teacher has acquired grows and spreads throughout a community. This is the concept that led to the design of Preparing Library Activities with New Technology (PLANT), a teacher training program developed to bridge the digital divide. It was initiated by librarians at NYPL and offered to teachers and school librarians in NYC. The first PLANT workshops were offered in 1995.

PLANT was designed as a multi-session workshop in computer technology, with a particular focus on using computers to access library resources and research materials. The training was not limited to using technology. It was NYPL's goal to help teachers and school librarians develop lesson plans that would incorporate computer skills into all curriculum areas. PLANT was designed to take place over four sessions, with each session running for two hours weekly.

Hands-on training was provided in four subject areas:

- Using the Library's online catalog
- Searching magazines databases
- Navigating the Internet
- Finding WEB sites using search engines

At the conclusion of the training, teachers and school librarians were asked to prepare a lesson plan that incorporated newly learned skills into their instructional framework.

PLANT sessions were held in NYPL computer training centers, where participants could work at their own terminal. The four sessions were sometimes held after school. Other workshops were offered for four weeks during summer vacation. NYPL's experience was that participants could be more attentive and had time to develop more effective projects when they attended during the summer.

One of the things discovered while presenting training in the use of the online OPAC was that many classroom teachers are not familiar with current children's literature. When participants located titles in the catalog they had no way of knowing whether a book was appropriate for the class they were teaching. NYPL librarians decided it was important not only to teach computer skills but to familiarize the participants with current trends in children's literature.

A second course, Advanced PLANT, combined reading of children's books with online educational resources. The citywide summer reading lists were used as the basis for the course. That meant that participants were assigned to read the same books that students were reading and then they were to develop follow-up activities for students for the subsequent school year. Advanced PLANT developed curriculum activities that were supported by websites, techniques for evaluating website content, making bibliographies using Excel, and many other computer skills were part of the course curriculum.

A Brief History of Libraries in New York City

Looking at the history and development of NYC it is very interesting to note the creation of public school libraries and public libraries in the city. First one gets a fascinating view of the city starting out as five independent boroughs. The boroughs were governed autonomously. The original Board of Education was founded in 1842. It was the result of unification on the part of the city's five boroughs to form one public education system for students. The five boroughs unified the fire department, and police department over 100 years ago. It is around this time that three separate public library systems decided to remain independent.

New York Public Library, founded in 1895, now has 85 branches; Brooklyn Public Library, founded in 1896, now has 60 branches; and Queens Borough Public Library now has 63 branches. Each of these systems currently has major building projects going on, as each system continues to grow. These 208 branches of the city's public library systems serve the eight million residents of NYC as well as the thousands of others who work in the city. Although the three systems have always remained independent, they have worked together from their earliest history. The term 'tri-library network' pre-dates the CLASP Initiative.

The CLASP Initiative

The Connecting Libraries and Schools Project was called CLASP, because NYPL liked the images evoked by the word "clasp": an adult clasping the hand of a child as they enter the local public library, the clasp of a handshake initiating the meeting of a teacher and librarians, the hands of a student clasping a book signifying a love of reading, and the image of a necklace clasp linking the schools with public libraries.

CLASP: The Pilot Project

The New York Public Library received the largest private grant ever given to support public – school collaboration. The goal of the collaboration was to ensure that every school child in grades kindergarten through eighth

grade received exposure to an array of public library services: a library visit with library card registration, an orientation to the public library for their teachers and parents, a summer reading program, and after school library activities. NYPL's tradition of programming to attract children and young adults into public libraries provided the foundation for CLASP. There was one year of planning time built into the grant, 1990-1991. The three-year pilot project resulted in 4,465 programs. The program reached 120,875 students, parents and educators. New library cards were issued to 22,742 children, teenagers and adults. In three NYC community school districts, 22 librarians worked on the project, some participated for the first few months, and some continued to participate for several years after the pilot ended.

CLASP targeted public school students in certain grades as well as targeting student behavior and attitudes that are influenced by adults both at home and at school. Parents provide a home environment that forms attitudes toward reading, and they are a key factor in the ability of students to travel to their local library. Teachers have daily extended contact with students that can reinforce ideas introduced by school and public librarians. School administrators set the tone for services within schools. School librarians are the natural allies of the public librarians, and enhancing the status of both within the educational hierarchy is essential. CLASP developed programs to reach these significant adults as well as their students.

The three community school districts that were funded by the initial CLASP grant contained 102 schools and 23 of the NYPL branch libraries. Grant money provided an opportunity to try new staffing patterns, supplement book budgets, and provide program support. In addition to offering the basic program of library services, CLASP was able to implement several special projects. Now the CLASP pilot was completed. What was learned? What techniques could other librarians replicate? What would be the future for CLASP?

Institutionalization of CLASP Initiatives

The vision of CLASP was to make reading and books an integral part of lives of New York City's schoolchildren. The mission of CLASP was to create new links among teachers, school and public librarians, parents and children through a variety of activities, programs and services. CLASP had three broad goals:

- To support collaboration and cooperation between New York City schools and the three public library systems.
- To encourage family reading and family literacy and make it enjoyable.
- To increase community awareness and use of all local public library branches.

The services provided were not new for public libraries to provide, but they were targeted through CLASP to focus on NYC's youth. The programs and services included:

1. Library card registration for children and families
2. Workshops for teachers, school librarians and parents
3. Guidelines for the integration of literacy training
4. Tri-library joint planning sessions for professional development
5. After school, weekend, and summer programs to promote reading
6. Articulation between school and public libraries regarding resources

When NYPL made a report at the halfway point of the pilot project, success could already be identified and listed. For instance, "Open School Nights", when schools are filled with parents meeting teachers, provide an excellent opportunity for library staff to greet parents and direct them to the local branch of the library. A poignant example is the parent, a new immigrant who had never traveled more than five blocks from her home, who met the local children's librarian from the public library at an Open School Night. The very next day this parent traversed the seven blocks to the public library, confident that a friendly face would be waiting for her there. Due to the success of the pilot project, Open School Nights activities were expanded from the 23 CLASP branches to all NYPL branches. The grant provided funding to pay for two or three hours of overtime for public library staffs to set up information tables in the schools on these special nights and other school occasions without effecting public service hours at the library branches.

When CLASP staff adopted the "Assignment Alert" form, NYPL was hoping that teachers would warn the public library about upcoming homework assignments. NYPL quickly learned that school librarians share the problem of assignments that tax existing library resources and frustrate students. Assignment Alert has become a good focal point for faculty conferences where school and public librarians can discuss the impact of homework on libraries.

CLASP prepared summer reading lists, supported by a budget that allowed the purchase some additional copies of some of the titles. This ability was hailed for overcoming the issue of school reading lists that contained out-of-date or unavailable titles. Because of the summer reading lists success, the preparation and distribution of these lists was expanded to a citywide effort. In 1995, for the first time the lists were jointly prepared and specifically designed for distribution by all NYC public schools as well as all branches of three library systems. These lists provided a uniform message about the importance of summer reading. In 1996, the impact was further enhanced by a budget to purchase copies of all of the summer titles for all eighty-two branches of NYPL.

Targeted Activities and Special Populations

Not all CLASP activities are feasible or appropriate for citywide implementation. Some special projects require so much preparation time that they can only be done with additional staff. Other activities are specifically designed for special populations that reside in particular communities of the city.

For example in northern Manhattan, where 85% of the students speak Spanish, CLASP staff was concerned not only about reaching students but also bridging the generation and language gap between children mastering English and parents fluent in Spanish and who were not attempting to learn English. Bilingual picture books and titles available both Spanish and English provided the opportunity for "in tandem reading aloud." One librarian reads a page in Spanish and then a second librarian reads the same page in English. As the two librarians alternate, students enjoy the story in a language comfortable to them. This also allows them to learn new vocabulary. CLASP staff modeled this technique for parents so they could share books in this fashion with their children as a way of providing simultaneous English and Spanish lessons.

Older children who are reading below grade level are trained by CLASP librarians in reading aloud techniques and then scheduled to share stories with small groups of younger children. At the beginning of this program, children's librarians from the public library selected a group of titles. As the older students develop evaluative skills, they begin to find other good books for sharing independently. At the end of the term an awards ceremony provides a certificate of achievement and recognition. It is often the first time reading and success have been linked for these students.

The joint meetings of school and public librarians that initially began in the South Bronx had two major goals; to bring public and school librarians together within the same neighborhood and second to provide professional networking for the school librarians. The biggest difficulty in holding these meetings was arranging the release of school librarians during the school day. Working with administrators in the community school districts allowed NYPL to select dates to maximize attendance. Programs attracting the largest audience have been appearances by authors and/or illustrators of children's books, internet and/or technology training, and book talks by children's and young adult librarians.

Although many activities provided support for school librarians, curriculum needs and student achievement, NYPL never lost sight of its primary goal: to bring children to their local public libraries. One successful program to achieve this was designed with the cooperation of school librarians and CLASP staff. The "Passport Project" provided an incentive for visits to a neighborhood library. School librarians distributed the "Passports to Reading", to every third grade student. For each visit to a local library, one page of the passport was stamped by the children's librarian. After the sixth visit the student took the passport back to the school librarian who awarded a book as a prize. Enthusiasm for the project extended to the lower grades and second graders could hardly wait for the chance to get a passport and join the fun.

CLASP designed the “Stump the Librarian” contest to entice the reluctant middle school age group to get excited about the local library. The original concept for Stump the Librarian was pioneered in the Bay Area Youth-At-Risk Project from the west coast. The idea was to tap the “know-it-all” attitude of teens, while allowing them to challenge the knowledge of adults. Local public librarians schedule a date to bring a few ready reference resources to the school library and get set up. They then challenge the students to ask a question for which the librarians cannot find the answer. Prizes are awarded, but the prize ticket must be redeemed back at the local library. Preparation requires collaboration between local public librarians, school librarians and a school’s faculty. Students become very enthralled with the possibility of stumping the librarians, and they have to do research to formulate good questions. Teachers learn what can or what cannot be answered in a library inquiry. What is a good question?

Replication Possibilities for CLASP

The private grant funding CLASP ended in 1994. Because of the enthusiastic support from the participants, plans were developed to phase CLASP into all NYC community school districts. Through an initiative of the New York City Council, CLASP funding continued uninterrupted in the NYPL pilot districts. Queens Borough Public Library and Brooklyn Public Library then each established one CLASP district. These five districts were the first phase of a citywide implementation of the CLASP Project. In Germany, the Bertelsmann Foundation was also interested in establishing “Public Libraries and Schools – New Forms of Partnerships.” After hearing about the CLASP success in NYC, they launched a five-year project in six cities throughout Germany.

Bringing CLASP to Your Community

A large private grant does provide an opportunity to demonstrate an effective collaborative program, but school and public librarians should not wait to begin cooperative endeavors. Many successful CLASP activities were developed with skills that librarians already have. Budget allocations may be small or non-existent and yet working together may be effective. Book talking was used with teachers and students. Storytelling was modeled for parents as an introduction to literacy. Reading aloud was expanded to books in other languages. Professional development programs sponsored by the NYC Department of Education began to include tri-library and school personnel regularly.

CLASP identified three levels of partnership: communication, cooperation, and collaboration. Communication can be as simple as knowing the names, phone numbers, fax numbers, and email addresses of the staff in local school libraries and public libraries. Cooperation expands services as each library type maintains program control while inviting participation from other library types, school and public. Collaboration requires each library to be solidly committed in order to support the next level of collaboration. Effective joint efforts require consistent, sustained communication as a prerequisite to cooperative activities. All of this will inevitably lead to successful collaborative endeavors.

In your community your first steps toward partnership might be to catalog the things that you already do cooperatively. You may already mail program announcements to each other. You may already schedule annual events that require shared space. You may already use class visits as a time to prepare packets of information for teachers to take back to the school community. You will probably be surprised to find how much there is already connecting your organizations together. Review these activities to determine if a minor change would expand the scope and outreach potential of your activities. You might want to share the cost of subscriptions of professional journals that each organization buys annually and network the table of contents page from each issue received.

One key element in effective communication is maintaining continuity. When there is a change of personnel, learn the names of new staff members and introduce new staff in your organization to all involved in cooperative efforts. Your first cooperative venture might be an Open House or Teacher Workshop. Plan ahead. Develop a budget, include the items you can easily afford, keep it simple, look for free materials, and create bibliographies or other lists of important information. Inexpensive reading incentives are always a big hit: “Read” posters, bookmarks, and pencils. Keep refreshments light and manageable. It is surprising how much can be done with very little finance and a lot of flexibility and creativity.

Keep your expectations reasonable as you implement a first project. Establish trust by following through, planning ahead, and organizing well. Always anticipate issues and concerns in advance, clearly define responsibilities and deadlines where necessary, and certainly follow the plan that was agreed upon. Schedule a time to review and evaluate after the project is completed. Don't forget it is possible to learn for misadventures as well as successful ventures.

If you feel ready for a large undertaking like "Passport to Reading" or "Stump the Librarians", give yourself extra time for planning. A new project may require official approval, and time should be included for answering questions and making adjustments if necessary for both cooperating library types. Be sure to tell everyone about the new collaborative project; publicity is needed for success. You may be the best advertisement for the new project by sharing your excitement and enthusiasm.

A Lesson from CLASP

CLASP began at New York Public Library with three broad goals. Before there was an online public access catalog or access to the Internet in every branch, the lack of technology required the development of connections that were more personal. Librarians visited schools to invite children and teachers into the local public library. In the 21st century - the days of OPACs, CD-ROMs and email - there are significantly more ways to communicate and work cooperatively. This enhances but does not eclipse the success of CLASP in connecting people – librarians, students, parents and educators – to create an environment that supports, student achievement and life-long learning in school, at home and at the local public library.

CLASP Timeline

1990–1991	CLASP Pilot Project established NYPL (Manhattan, Bronx, and Staten Island) Planning Year
1991-1993	NYPL's Three Year Successful Pilot Includes 23 NYPL branches, 4,465 programs, 120,875 students, teachers and parents served.
1993-1994	NY's City Council receives proposal to fund CLASP Citywide, Queens Borough Public & Brooklyn Public Libraries received partial funding for CLASP 23,903 students served.
1995-1999	QBPL, NYPL, BPL receive increased funding, additional community school districts are added to CLASP service areas.
2000-2001	CLASP is fully funded by NY's City Council for all 36 Community School Districts, Citywide participation, 1,200 hundred schools, additional 286, 456 students, parents and teachers served.
2001-2002	NYC budgets drastically reduce services as result of September 11th, World Trade Center terrorists attack.
2002-2003	CLASP Offices begin to close, service is transferred to public library's local branch staff.
2003	NYPL is conducting a study, seeking to reinstate CLASP

CLASP Facts at a Glance

Total	# of Residents New York City	8,000,000
Total	# of Students New York City Schools	1,087,255
Total	# of English Language Learners	134,103
Total	# Community School Districts	36
Total	Annual Budget Dept. of Education	\$ 12.2 Billion
Total	Annual Allocation Per Student	\$11,220
Total	# Pedagogues (Teachers & Librarians)	91,620

NEW YORK CITY DEPARTMENT OF EDUCATION (Founded 1842) 1,200 Schools

NEW YORK PUBLIC LIBRARY (Founded 1895)

(Manhattan, Bronx, Staten Island) 85 Branches
Total # CLASP New Library Card Registrations 42,742
(Children, Teens, Adults)

BROOKLYN PUBLIC LIBRARY (Founded 1896)

60 Branches
Total # CLASP New Library Card Registrations 8,954
(Children, Teens, Adults)

QUEENS BOROUGH PUBLIC LIBRARY (Founded 1897)

63 Branches
Total # CLASP New Library Card Registrations 11,459
(Children, Teens, Adults)
Total# CLASP PROGRAMS 1991- 2002 15,897
(Reaching Children, Teachers and Parents)

MAJOR LANGUAGES SPOKEN BY NYC STUDENTS

English	Korean	Urdu
Spanish	Chinese	Arabic
Haitian Creole	Russian	Bengal

Biographical Note

Ms. Sandra Kennedy Bright is a native New Yorker who is a product of the New York City school system. She is currently the Director of the Office of School Library Services of the Division of Instructional Support for the New York City Department of Education, working with over one thousand school libraries that support New York State Learning Standards for 1.2 million students in the city's public schools. Ms. Bright, who is a member of the 2003 Caldecott Committee, was recently a member of the NYS Commission on Library Services for the 21st Century. Ms. Bright has been an adjunct instructor for the Graduate Library Programs of Pratt Institute, Palmer Library School of Long Island University, and Queens College of the City University of New York. Her library career has exemplified multi-type library cooperation.

Pat Pledger

Information Officer

Government Education Portal and Sibling Sites

EdNA Online

Australia.

EdNA Online is a unique national collaboration between the Australian Commonwealth government Department of Education, Training and Science and the state Education Departments. This collaboration unites learning communities as it provides free resources and online services to all education sectors, including tertiary, schools, vocational training and adult education. There is access to evaluated curriculum resources in a safe environment. The use of standards to enable sharing between states, territories and national education departments has extended knowledge networks. Free communication tools link teacher librarians, teachers and students and assist engagement in professional development.

Background

EdNA Online is a unique national collaboration between Australian Commonwealth government Department of Education, Training and Science and the state Education Departments. Barriers have been broken down between state education systems through an agreed Australia wide collaboration to provide resources and online services to all sectors of Australian education: School, Higher Education, Vocational Education and Training, Adult Community Education and International Education. The Commonwealth and each state education department contribute selected items to the database of materials, which provides educators with free access to evaluated curriculum resources in a safe environment. This participation occurs because of the use of standards to enable sharing between states, territories and national education departments. EdNA Online provides free communication tools that link teacher librarians, teachers and students and encourage engagement in professional development.

Discover with the EdNA Online database

The EdNA Online database houses a collection of over 16,000 evaluated items for all aspects of education and provides links to a further 323,000 linked items. Members of the Australian education departments and Information Officers working within each sector have selected these items. The database is unique in that it contains both information about education and training and resources to support the curriculum. It provides specific resources and tools to support and utilise the Internet in teaching and learning, while also providing resources for all subject/discipline/industry areas. (McKenny, 2002)

Curriculum items are categorised to facilitate browsing by teachers and teacher librarians. Thus the database can be searched using the EdNA search engine or the user can browse using the category structure. Because all services are free, this helps to break down the digital divide between rich and poor schools. Educational institutions are able to access an EdNA logo to put on their own sites, giving them access to safe evaluated material and an opportunity to brand their sites as quality and trusted sites.

Search and browse functions

EdNA Online users are offered a number of different ways to discover resources held in the database or linking to it. The 'standard' search option found at <http://www.edna.edu.au/discover> offers a choice of searching for items that have been evaluated, EdNA Online collections, which include noticeboards and newsletters, and sites linked to the evaluated resources. In addition, users can search external databases such as Government Education Materials (GEM) and Vocational Education (VOCED). The 'advanced' option enables more precise filtering of resources, by specifying metadata fields to be searched. A distributed search (Free EdNA Search) is also available for users who prefer to install the search tool (API) on their website and search for EdNA Online resources without leaving their own site. (White, 2003)

People coming to EdNA Online to search for resources can also use the Browse structure that has been developed to assist in resource discovery. The school section is broken into the following categories: For Students, For Teachers, For Principals, For Parents, Key Learning Areas, ICT in the Curriculum, Oz Projects and Schools, Authorities, Agencies. These are then broken into further categories.

EdNA Metadata Standard

As each item is entered into the EdNA Online database by Information Officers, it needs to be described. The EdNA Metadata Standard is used to do this. Metadata is information about information and is structured in a manner that facilitates the management, discovery and retrieval of resources on the World Wide Web. Metadata standards have been developed to support both machine interoperability (information exchange) and targeted resource discovery by human users of the Web. Metadata standards for the Internet are an attempt to bridge the gap between the comprehensive cataloguing which is done by professionals in the library context, and the free-for-all of document creation on the Web. (EdNA Metadata Standard, 2000)

The EdNA metadata standard is comprised of a set of guiding principles and a set of elements. These elements include Dublin Core (DC) elements (some with EdNA qualifiers) and EdNA elements to meet the specific needs of the Australian education and training community. Some of the EdNA elements are specifically for the administration of EdNA Online resources.

The EdNA Metadata standard consists of the following elements:

- DC.Identifier
- DC.Title
- DC.Description
- DC.Subject
- DC.Publisher
- DC.Creator
- DC.Date
- DC.Type
- DC.Format
- DC.Language
- DC.Coverage
- DC.Rights
- DC.Relation
- DC.Contributor
- DC.Source
- EDNA.Audience
- EDNA.Approver
- EDNA.CategoryCode
- EDNA.Entered
- EDNA.Indexing
- EDNA.Review
- EDNA.Reviewer
- EDNA.Version

In EdNA Online, metadata is used to aid searching by the application of details about the resources that can be searched. When searching, words that are used to describe the resources in the metadata elements are given priority over words that are used in the text of the document. Metadata is also used in the general management of the content in the database and to allocate items to the categories in the EdNA Online browse structure, which is another aid to resource discovery. It provides general cataloguing information about the items. (EdNA Metadata Standard, 2000)

Using EdNA Online as an education search engine for resource discovery

There are many advantages with using what could be termed as an education search engine to locate education resources rather than using a conventional search engine like Google.

- EdNA Online is quality assured and contains over 16,000 items that have been selected by educators as relevant to education and curriculum needs. Google is a full text index search engine that will look at all types of materials that are on the Internet and not necessarily those that are of an educational nature. For example a search by EdNA for the term “International Year of Freshwater” will bring up 8 items that have been selected as suitable for school purposes. A Google search for ‘International Year of Freshwater’ will bring up about 261,000 items that are not necessarily relevant for schools. The best resources will not necessarily be in the top 50 to 100 sites that come up. A Google advanced search using the Phrase ‘International Year of Freshwater’ has 3,240 results. Furthermore, in EdNA Online, a closer look at the results shows a theme page for ‘International Year of Freshwater’. This theme page at EdNA will show how the topic has been further broken up into sub themes such as: freshwater, water pollution, classroom activities and School/teacher created pages. These resources are ones that teachers and teacher librarians may wish to use in a classroom, but would need to do extensive and time consuming searches for in a search engine.
- The school materials contained in EdNA Online come from the Australian Commonwealth, State and Territory Education Departments, or are selected by an Information Officer who is an experienced teacher. These are all safe sites chosen for their appropriate use in a school setting. Google is not quality assured, and does not discriminate between any types of materials that are on the Internet. Inappropriate adult material can also be included in the search. Although the search in Google can be restricted to .edu and .gov domains, many students may not be sophisticated enough to search in this manner, and would be missing relevant material that can be found at .net, .org and .com sites. Search engines like Yahoo and LookSmart have people who assess content for their directories, but they may not be specialists within the education and training area. The information on EdNA Online is current and relevant, because experts in teaching and learning manage it. Search engines do not provide such information, and often may provide ‘cached’ versions of web pages, that may be old versions or copies of documents that have been removed from the website. The currency of the page will depend on when the search engine spider last visited the page. (EdNA Metadata Standard Review Discussion Paper, 2003).
- EdNA Online has access to content in what is known as the Deep Web. Deep Web sources store their content in databases that conventional search engines do not search. Information on the Deep Web is currently 400 to 550 times larger than the World Wide Web and more than half of the Deep Web content resides in topic-specific databases. (Bergman, 2003) EdNA Online’s current strategy to access the Deep Web is to develop strategic alliances with organisations that have quality digital repositories in each sector of education and training. It is able to search other educational databases such as GEM, the US Gateway to Education Materials database and the Vocational Education and Training (VOCED) database with its search engine. A search engine like Google does not search content in repositories or databases, unless this content has been ‘surfaced’ by making the database content accessible via a URL. Such a search engine misses many excellent education materials.

Specialist collections

In addition, EdNA's technical architecture enables the packaging of resources into specialised collections that can be used by all sectors of education and include the following:

- The Australian Government Education Portal <http://www.education.gov.au> which has approximately 2,500 items that are stored in the EdNA Online database, but which has its own unique look and feel;
- Technical Standards site, which is a gateway to standards, protocols and specifications relevant to learning, education and training. (White, 2003)

Of special interest are the EdNA theme pages <http://www.edna.edu.au/schools/themes/> which contain not only themes that are useful for Australian school libraries but which have a universal appeal. These include topics like Ancient Egypt, Fostering reading, Chemistry resources, Nutrition, Oceans, and United Nations.

EdNA Online is a specialist collection that is quality assured. Its sites have been reviewed and are of suitable, safe quality. It is a site, which teacher librarians can use to select resources to support the information needs of the school community and which can be recommended to save teachers work. It saves time, with teachers and students needing only to review sites for their own purposes, rather than select them from hundreds of choices.

Communicate

EdNA Online has developed a range of free communication tools including notice boards, discussion lists, forums and chat rooms. These have helped in the establishment and extension of online education networks and communities. These tools give educators the opportunity to discuss and highlight teaching, learning, research and education issues. They also support learning and professional development by the promotion of conferences and events. Online learning communities have resulted in the stimulation and maintenance of hub groups, networks and partnerships. It has also given educators the opportunity to learn new online skills in a non-threatening environment. (White, 2003)

Discussion lists, online forums, chat tools

The suite of interactive tools allows both synchronous (occurring at the same time) and asynchronous interaction by participants, while the chat room provides a real-time virtual environment for sharing views and exchanging documents. The different variety of services can be seen at <http://www.edna.edu.au> under the menu item 'Communicate'. (White, 2003)

Currently, there are over 500 mailing lists and 45 forums and chats, utilised by teachers, principals, professional associations, trainers and educational administrators. Teacher librarians and their professional associations are making good use of the free tools. For example School Libraries Associations and hub groups conduct business through online forums, linking members from country and city and state-to-state. Currently the Australian School Library Association (ASLA) shares discussions and documents with its members Australia wide, as does the South Australian School Library Association. Library computer systems are discussed and problems solved with another discussion group. When this group was initially set up, members of a similar listserv from another state were asked to join, to share their expertise and to extend the learning community. EdNA Online forums have developed communities of learners based around their interests or needs and have allowed teachers and students, especially in remote and rural locations, the same choices as their city counterparts.

The EdNA discussion lists, online forums, chat tools provide an educational setting that other services cannot provide. They are free and there is no distracting advertising on the site. Once a user has registered, they can join other educational lists that are listed on the site. EdNA Online Information Officers are available to provide in-service sessions on using the tools and can help new administrators set up the lists.

Online newsletters

EdNA Online produces a number of newsletters that aim to inform the education and training community of new developments and projects in the Australian and international education arena. Subscribers are kept up to date with what is happening in the education world and also with new items and events on EdNA Online. There are more than 14,600 first-line subscribers to the EdNA Online newsletters. (White, 2003).

The following would be helpful to an international audience:

- The Communicator, providing an extensive weekly summary of key reports, news, media releases and major national and international events,
- EdNA for Schools newsletter featuring school-related resources and information
- New in Early Childhood for educators,

These newsletters can be subscribed to at <http://www.edna.edu.au/system/tools/email.html>. It is also possible to obtain the News headlines through a Really Simple Syndication (RSS feed), and present it on another website.

Noticeboards

Currently, there are many active noticeboards on EdNA Online, featuring conferences and events in Australia and overseas, online conferences, a calendar for Australian schools, library books for schools, museums and galleries news and events, resources on appropriate and safe use of the Internet, and others. While the Information Officers provide monitoring and ongoing maintenance of the service, stakeholders and users of the site are welcome to submit notices for the noticeboards. (White, 2003)

The most useful to this audience would be the International Conference noticeboard, which features conferences and events relevant to education and training, held out side of Australia.

It can be found at <http://www.edna.edu.au/noticeboards/noticelist.html?id=690>

Another noticeboard that would be helpful is Online Conferences and Events board at <http://www.edna.edu.au/noticeboards/noticeread.html?nbid=2353&nid=2359&sort=&show=> where conferences that are held online are advertised.

The Calendar for Australian schools noticeboard is a calendar, which has the main Australian festivals and holidays listed. It also contains international events. All events are linked to a parent world wide web site so are very useful for finding information about important proceedings The calendar can be found at:

<http://www.edna.edu.au/noticeboards/noticelist.html?id=1981>

The availability of a word document and excel document provides schools with the opportunity to expand on it with their own events and it may be suitable as the basis for a school library calendar. It is available to download at <http://www.edna.edu.au/noticeboards/noticeread.html?nbid=1981&nid=3291&sort=&show=>

Oz Projects

Ozprojects, which can be found at <http://ozprojects.edna.edu.au/>, are online curriculum projects, which provide students with unique learning opportunities. The site lists online projects that can be joined not only by Australian teachers and students, but also by international participants. Projects come from parts of the world as diverse as Ukraine, South Africa and the United States as well as Australia. Many projects are designed to help children gain a better understanding of children in other parts of the world. It is an excellent opportunity to either list an online project that you or your school is running or to join an online project of educational interest.

The projects are organized by stages of schooling and curriculum areas and a detailed search can also be made. For those educators who are new to online projects, there is an extensive help section that provides access to a broad range of resources and links. These provide information about getting started with an online project, participating, and developing or coordinating online projects.

Collaboration between countries is encouraged in global projects like The International Learning Quest Challenge at <http://ozprojects.edna.edu.au/challenge/>. It is for teachers and/or students to develop a web page or site following a Learning Quest format. The main aim of the Challenge is the development and sharing of online content. Quest2003 is an interactive list created to support the International Learning Quest Challenge, where participants can ask questions and obtain help in problem solving. It will also be a vehicle for information about the Quest.

EdNA Online communication tools provide teacher librarians with the opportunity to “work with school leaders to integrate Information and Communication Technology into the curriculum Role statement” and “sustain a high level of professional knowledge”. (Role Statement for Teacher Librarians 2002).

Collaborate

EdNA Online was created initially to provide a national education project that would encourage collaboration, information sharing, and assist in avoiding duplication of effort in education and training initiatives. It has achieved collaboration through its sibling sites, metadata sharing and standards development. Metadata is exchanged from other repositories and members of the education community suggest online resources.

Metadata tool and Harvesting tool

Through the agreed use of metadata standards for managing resources, the Commonwealth and State governments are now able to harvest education sites into the EdNA Online database. The barriers to sharing information have been broken down even further with other institutions like Australian Museums Online feeding into the system. To assist in the creation of metadata compatible to the EdNA Metadata Standard and to enable successful uploading of resources from external collections to the EdNA database, EdNA Online offers free tools to the education and training community. Quality assurance assessment and guidance is provided throughout the process of metadata creation and harvesting.

Use of EdNA Online as a Warehouse

Learning communities have benefited by the use of the EdNA Online database as a warehouse, which repurposes data and presents it on other sites. These sites have their own look and feel, and only selected portions of the database are used. Sibling sites have been developed using this technique. They include sites that are a result of a national collaboration to provide information for education and include:

- National Software Evaluation site (<http://www.edna.edu.au/sibling/nsep/>), which is a collaborative effort by all Australian States and Territories to bring together reviews of software for the use of Australian school communities.
- ICT (Information and Communications Technology), Leading Practice site (<http://leadingpractice.edna.edu.au/>), which is a collaborative effort by Australian States and Territories to bring together leading practice in schools and leadership in the Australian school communities.
- ICT (Information and Communications Technology) Research site which contains research material on ICT initiatives relevant to the Australian school sector.

The EdNA database can also provide information services as web services using Extensible Markup Language (XML) and Rich Site Summary (RSS), which allow information to be transmitted between organisations. These keep teachers up to date and save time. These information services include:

- Latest items added to the database (and in any category)
- Headlines
- Newsletters
- Noticeboards
- Search APIs which search EdNA Online and other quality repositories and specialist collections within EdNA Online (eg Technical Standards site at <http://standards.edna.edu.au/>)

Submit online resources

Individuals or groups are able to submit resources for consideration for entry into the database. The Australian School Libraries Association (ASLA) proposed a number of links to research about school libraries and the role of school librarians for inclusion in the database. These have been entered for general use and also given a unique search string in the metadata to identify them. A link to this group of resources will then appear on the ASLA website. This collaboration will result in the educational community having access to that research via EdNA Online, the teacher librarian community through the ASLA website, and the items themselves will be maintained by EdNA Online Information Officers, ensuring that links are kept up to date.

Alliances

EdNA Online is part of a global network of knowledge, which collaborates to ensure that learning communities have access to each other's collections of quality evaluated online resources. EdNA Online has established memorandums of understanding to share the resources that are contained in many of the world's most important educational repositories. These include:

- Australia's Culture and Recreational Portal, (<http://www.acn.net.au/>), which contains over 2,200 websites and 900,000 pages about Australia's culture and recreation;
- Australian Museums Online (AMOL) (<http://amol.org.au/>), which provides educational resources from Australian museums and galleries.
- Gateway to Educational Materials (GEM), (<http://www.thegateway.org>), an initiative of the U.S. Department of Education, which provides educators with quick and easy access to high quality lesson plans, curriculum units and collections of educational materials found on various federal, state, university, non-profit, and commercial Internet sites;
- MERLOT (Multimedia Educational Resource for Learning and Online Teaching) (www.merlot.org/), a free and open resource designed primarily for faculty and students of higher education;
- European Schoolnet, (<http://www.eun.org/portal/index-en.cfm>), where educational resources, news, class activities, collaboration opportunities, online communities can be found;
- Te Kete Ipurangi - The Online Learning Centre (TKI) (www.tki.org.nz/), which is a New Zealand bilingual portal and web community which provides quality assured educational material for teachers, school managers, and the wider education;
- VOCED, produced by Australia's National Centre for Vocational Education Research (NCVER) (www.voced.edu.au/), as part of its role in a UNESCO regional centre of excellence in technical and vocational education and training, which is a large, free, web-based international database of abstracts on vocational education and training research, policy and practice;

This ability to search multiple repositories gives EdNA Online users a choice of access to the Deep Web and some of the best of the world's educational resources.

Customisation

It is possible to customise the data within EdNA Online to meet the needs of the user. When a user logs on to EdNA Online, they can personalise the EdNA tools and services to select the services and information that are relevant. After logging in, they would receive a customized view of the homepage that they may want for example the school view. They then have the opportunity to personalize the page to meet their own set of interests. They could choose the content and categories that they wish to see, add in the newsletters and noticeboards that are of interest and link to categories to see new items that have been added. They have the ability to add or delete items on the page. A school librarian could have a personalised page, which displayed the latest conferences and events, new items going into the curriculum areas, links to professional association discussion groups and school headlines. This has real value for regular users, as everything that they might want to see is stored at one point, while they still have the opportunity to revisit the main home page if desired.

Developers Kit

EdNA Online provides a free set of information to provide website developers with information about how to embed EdNA tools such as html, XML into their own website. These tools will then enable visitors to that site to search EdNA from the site, browse any of EdNA's categories from their own site. They will also be able to pick a category and see what's new in that category. Noticeboards that are useful to the education community, like the conference noticeboard and the EdNA newsletter for example, can be integrated into a website, by applying a Really Simple Syndication (RSS) feed which is available to any member of the education community.

This tool kit provides access to free high quality, evaluated educational information that is of value to the education community and which can be implemented at the client's end. The knowledge and understanding of the learning community is greatly extended by this. The Australian Government Education Portal (<http://www.education.gov.au>) is an example of the application of XML and RSS feeds. It is possible for a teacher librarian who is managing a school library website to be a leader in the school community by providing the up to date information about education news. The professional development of staff can also be enhanced by providing access to the latest conferences on the school's own library website.

Conclusion

EdNA Online is in the business of breaking down barriers in education. It has been a successful national collaboration that provides free evaluated resources for curriculum, professional development and education. Its discussion lists and forums have been instrumental in the growth of learning communities and have provided opportunities for professional growth. The use of standards to enable sharing between states, territories and national education departments has extended knowledge networks.

References

Bergman, Michael K. (2003). *The Deep Web: Surfacing Hidden Value*. Retrieved March 14, 2003 from <http://www.brightplanet.com/deepcontent/tutorials/DeepWeb/index.asp>

EdNA Metadata Standard (2002). Adelaide: **education.au limited**. Retrieved March 14, 2003 from <http://www.edna.edu.au/metadata/>

EdNA Metadata Standard Review Discussion Paper (2003). Adelaide: **education.au limited**. Unpublished document.

McKenny, Carol (2002). *EdNA Online: strategic directions for customer focused resource discovery*. Adelaide: education.au limited.

Role Statement for Teacher Librarians (2002). Adelaide: School Libraries Association of South Australia. Retrieved March 14, 2003 from <http://www.slasa.asn.au/rolestatement.html>

White, Jerry (2003) *E-learning – Key Australian Initiatives: An opportunity for all learners*. Adelaide: **education.au limited**. Retrieved March 14, 2003 from http://www.educationau.edu.au/papers/elearning_poland03.pdf

Biographical Note

Pat Pledger is an Internet librarian who provides expert evaluation and creates quality records for the Australian Government Education Portal, which is powered by the EdNA Online database. Pat has worked in all sectors of schools as a teacher and teacher librarian. She spent ten years as library coordinator in large Adelaide schools with responsibilities for resource based learning and joint use school and public library. Pat's commitment to effective use of the Internet has led to the co-authoring and publishing of several WebLinks subject books containing lesson plans and World Wide Web sites. She has a keen interest in promoting reading in schools, and is co-author of "Senior Fiction – Books and Films Sorted by Themes" with Fran Knight. Email: ppledger@educationau.edu.au

