New and Emerging Information and Communication Technologies: Implications for Teacher-Librarians and School Libraries

Ken Haycock
Professor and Director
School of Library and Information Science
San Jose State University
U.S.A.

Teacher-librarians have a long history of embracing new and emerging technologies from “paperbacks” to “non-print” materials to 21st century Web 2.0 tools and techniques. Have learning and achievement improved? Have the rules of engagement with students, teachers, administrators, and parents changed? Have teacher-librarians become more critical to the educational enterprise? Ken Haycock reflects on forty years as an educator, a senior education official and school board president and a researcher, and the lessons learned for quality school libraries with essential teacher-librarians.

As I reflect on my career of almost forty years in teacher-librarianship and related enterprises such as school principal, senior education official and university professor, I am struck by the Yogi Berra expression “This is like déjà vu all over again.” and on some days actually to be more accurate, “déjà lu” all over again.

Of course there have been many changes in our working world, and many for the better. Richie Partington (2007), a recent graduate of the San Jose program who specialized in work with young people, noted in his commencement address this Spring that

Thirty-two months ago, when I became part of the program, the average adolescent had not created a MySpace page, had not participated in social bookmarking, had not helped to create a wiki, had not heard of Second Life, had not viewed a YouTube video, had not belonged to a ning, nor utilized an i-Pod for gathering and temporarily storing notes, ideas, and formulas for school. Neither had I.

He goes on to say:

Upon being invited to speak this afternoon, one of my first thoughts was that it would be really neat to create a YouTube video in which my Second Life avatar would address all of you. I could have gotten a few of the popular YA authors who are my MySpace friends to do Second Life walk-on appearances with me. But in the end, I decided to leave -- for a future
Indeed, our graduate school does position itself as cutting edge and recently spent thousands of dollars acquiring a 16-acre island in Second Life. We see many prospects and possibilities for improved teaching and learning. However, as in schools, we have a responsibility to support and train at least informally our colleagues in using these technologies or we are once again perilously outside the norm of our institutional culture. I was reminded of this once again when a senior university administrator called to ask if we had really bought an island and where had we obtained the money and how did we intend to use it. She envisioned Hawaii rather than a parallel universe of immersive environments. When we opened our campus we invited colleagues to attend a cocktail reception; again, a senior administrator called to ask if I knew that I could not spend state tax dollars on alcohol, totally missing the concept of virtual environments.

It is all very well to be cutting edge but not if colleagues seriously question the value of the technologies we intend to use and how we are intending to use them. This is especially true if their view of our worth is defined less by our tools and technologies and more by our behaviors, as the research suggests.

This is made worse when we promote new tools and technologies to each other but seem unable to engage our teaching colleagues in their effective use. This of course goes to the heart of our profession, the importance of collaboration.

With the indulgence of the conference organizers, then, this session allows me to reflect over my career, drawing on several of my studies and writings, to propose where we might best devote our time and energy and how we might best incorporate new and emerging technologies if we wish to be seen and engaged as valued partners and colleagues.

*Imagine for a moment this scenario (2000b):*

You have just completed your certification in school librarianship through your local university. Several school districts have come to recruit from your class. You have three job offers by noon. The system has promised you additional pay for additional responsibility as a teacher-librarian, secretarial and technical support staff and possibly a renovation. You’re excited and looking forward to making a difference.

*Scene II:*

Your first week on the job and you meet with your staff—another teacher-librarian half-time, a full-time professional librarian as auxiliary staff; a technician for equipment and software and one and a half secretaries. Not bad…five staff for 1,100 students. And the budget is “reasonable”—$10 a student.

*Scene III:*
Move to a year later: you love your job and feel that you’re making a difference. There is so much to be done—the History department has moved to team teaching and department-wide independent study; the English department has placed a priority on recreational reading, straining funds and time; the French department has taken an interest; and the Home Economics department is stressing personal decision-making through resource-based assignments…

Scene IV:

Nevertheless, you decide to move. The school was great…a great beginning, but the culture a bit too staid. (They even offer you a salary increase to stay.) The new school is with a new school district and is just being planned—the principal has hired you as a major department head, you get to plan your own facility, the staff includes the same as your previous school plus an additional secretary and there are only 750 students. The budget will be $25 a student the first year and the new resource centre will be over 5,000 square feet…

Am I dreaming?

Not at all—that was my experience in Canadian public schools thirty-five years ago. As teacher-librarians we were well-educated and well-prepared and had ready access to consultative assistance and support. We were passionate about school librarianship as we then called it, and networked to learn together. We were advocates and leaders in our schools and school systems. It was just expected.

And today?

We know more today about effective education, about library and information studies, about information literacy, about curriculum and staff development than ever before. Yet there are fewer university faculty members, fewer school district coordinators and consultants and of course fewer teacher-librarians. This is not to present a dismal picture of the present. There is much to celebrate. There is much good work underway. Many teacher-librarians are making a difference in the lives of young people, and of teachers and administrators. Nevertheless, we were unable to integrate our role and positions in the fabric of the school. We were unable to institutionalize support for teacher-librarians as critical partners. Indeed, in many ways, in many parts of the world, we seem to be starting over.

The Journey Begins

Let me trace our journey through my own career experiences and writing.

I first wrote about our teaching and leadership roles as a beginning teacher-librarian thirty five years ago (1972, 1973b) as I quickly realized that with a new school principal and a faculty of mainly newer younger teachers value was placed on the visible and the collaborative. Indeed my principal and vice-principal of the day, as well as many of my department head colleagues, enjoyed providing advice and support for my ideas and enthusiasm. It was clear that they valued collaboration as a partner and informal training in newer technologies. Our issues are now seen as historical but I do not see them as so very different from those today as only the media have changed, and profoundly so, for sure, but the behaviors are consistent over time.
We dealt with classroom collections of resources (the attitude was that everything was available from the classroom—sound familiar?), the audio-visual coordinator (who saw the teacher-librarian as a competitor concerned primarily with books—sound familiar?) and the new equipment and software (yes, film projectors, 8-mm film loops, film strips all had their attendant uses and constraints).

We dealt with these issues in three ways:

[1] know the new technologies well and use them comfortably; provide informal sessions for individuals and groups on their effective use in instruction; offer to assist; make it as simple as possible;

[2] always focus on the appropriateness of the medium for the intended purposes, on information and ideas over a preference for a particular carrier (that is, focus on content over containers; focus on appropriate use over a personal preference for literature or technology);

[3] promote support for access, never on control; organize for ease of access not on oversight in classrooms and closets; promote collaboration and partnerships, clarification of roles of teacher-librarians and technology specialists, never on competition for scarce resources.

I am certainly not a Luddite (I have written on the effective use of technology for more than twenty-five years from microcomputers (1983) to search engines for young people (2003b)) but I do believe that we are too focused on the tools and not enough on the process of affecting achievement as identified in our own research and replicated over time.

The Research Base

There have certainly been many researchers and writers who championed the impact of school libraries and teacher-librarians on student achievement, even from the 1930s; my interest began when I read of a school librarian who conducted her own school action research in 1969 and how readily I could translate that into discussions with colleagues who were intrigued about the possibilities for improving student learning. My first synthesis (1981c) led to a larger work bringing together 600 doctoral studies (1992c) which was updated in journals which I edited. Further syntheses were published more widely (1995; 2003a; 2003c) by groups as diverse as national heritage and publishing groups who saw the need for well-funded and well-supported libraries and teacher-librarians. At about the same time other writers were similarly pulling together and building on the research base. Indeed, from my own observations (1981b; 1997b), the work holds across at least the major English-speaking communities of Australia, Canada, the United Kingdom and the United States.

Here are just some of the conclusions:

Research Related to School Library Staffing

In all cases, library staffing levels correlate with test scores—students benefit from more access each week to a qualified teacher-librarian (TL). Improvements are even more dramatic when TLs play a leadership role by collaborating with classroom colleagues, teaching information literacy skills and participating in technology management within the school.
The most effective teacher-librarians are indeed teachers and there are many good reasons for this (1977a, 1979), with well-defined competencies (1997c; 1998c) and an appropriate and effective education after basic teacher education and experience (1982a; 1996); as one might expect, teacher-librarians educated in substantive and sustained ways to collaborate do indeed collaborate with colleagues, others do not. However, few programs of education focus on collaboration and leadership.

Several state and provincial agencies noted my keynote address to the International Association of School Librarianship on strengthening the foundations for teacher-librarianship (1984a) and planned in-depth institutes on developing well-integrated programs; these institutes were held in four countries and many were evaluated and found to result in a difference in professional practice. Collections of the best readings from Emergency Librarian and Teacher-Librarian (1990b; 1999a) followed, with trainer of trainer programs (1990d).

In response to queries from school principals who attended these institutes, work was completed on the selection (1990c) and evaluation (1991) of teacher-librarians, an area where we object strenuously in our literature about the appropriateness of the criteria but offer few alternatives that focus on effectiveness (collaborative planning and teaching) over operations (library administration).

I also came to learn from my experience as a school principal that the role of the teacher-librarian is probably most similar to the role of the principal (1992b) but no principal would be aware of this unless these similar behaviors, viz., collaboration, leadership and advocacy, were demonstrated.

Research Related to School Library Programs

In schools where teacher-librarians have longer hours, there tends to be greater collaboration with teaching staff, more visits by students and thus higher reading achievement. Student achievement is higher in schools where the library is open all day and the teacher-librarian is on duty full-time. The support of superintendents, principals and teachers is essential to quality school library programs and student proficiency.

Many believed thirty years ago that the school library program rested on planning with colleagues and that planning was only possible if the program was scheduled flexibly by the teacher-librarian. In other words, it was difficult to plan with colleagues if the role of the teacher-librarian was solely to provide the planning time. In the 1970s I coined the term Cooperative Program Planning and Teaching (CPPT) which evolved to Collaborative Program Planning and Teaching as language changed. More and more studies note the critical importance of collaboration and several studies demonstrated that the attitude of the principal and flexible scheduling led to improved planning and involvement in teaching and assessment (1997a).

The support of the principal is a key ingredient to successful programs. Indeed the program is a partnership of the principal, the classroom teacher, the teacher-librarian and the funding agency. The principal shapes the culture of the school and often controls the allocation of time and money, teachers control the instructional program and its objectives, teacher-
librarians contribute knowledge of resources and exploitation of those resources for learning, and the funding agency provides policy guidelines and administrative support. Simply stated, however, people do things for their reasons, not ours (1999b). I first noted the means by which one gained support from principals when I was a district coordinator and could observe hundreds of teacher-librarians and the response of school administrators (1981a) but had the suggestions read and reviewed by both supportive and non-supportive principals; needless to say there were changes made. Gradually, the research literature pointed to the behaviors of principals who made a difference for quality programs (1999c).

There are many audiences for our expertise if we actually talk with those audiences in their own language; for example, a paper I wrote on planning for the successful use of information and communications technologies in schools was reprinted in several journals and documents no doubt because it was written with a superintendent of schools (1999d). Similarly, our positions on the importance of information literacy for secondary schools found a more influential audience when written for secondary school principals (1999c) in their journal, not ours.

It is also apparent that partnerships can be extended to college and university libraries as our research base is more rich and robust and can point to criteria for successful student learning in other academic environments as well (2000a).

**Research Related to School Library Collections**

Increased access to networked computers, providing access to Internet and library resources, including licensed databases, correlates with higher achievement levels. Higher spending on books and other materials – both for recreational reading and curriculum assignments correlates with increased reading scores. In schools where teacher-librarians exploit the resources of the local public library, student achievement tends to be higher than in those that don’t.

We are knowledgeable about resources regardless of form and format but we need to be more active in articulating the needs of learners and working with vendors to provide those resources (1985; 1992a). There are also many opportunities for improved collaboration with public libraries (1989), short of shared facilities, about which I have also written much. Too much of this work is taken for granted; we know, for example, that when state-wide database licenses are cancelled few teachers and administrators were even aware of them or that they were not “free”. We also know that only a minority of students use these databases or our Web sites, yet we insist on being builders more than communicators, advocates and staff developers. (I often wonder how this is so different from the teacher-librarians forty years ago who hid behind cataloguing rather than teaching.)

We need more state-level and national approaches and systems-thinking to resource sharing and program development (1982b 1982c; 2005). Indeed, paradoxically, we need to expand partnerships beyond the school now more than ever before (2002a) just as the technology provides unlimited opportunity but our available time is severely reduced.
Research Related to School Library Funding

High achieving schools tend to assign a greater priority to school library funding from the many program choices available to them. The relationship between library resource levels and increased achievement is not explained away by other school variables (e.g., per student spending, teacher-pupil ratios) or community conditions (e.g., poverty, demographics).

In fact, no less than forty years of research—conducted in different locations, at different levels of schooling, in different socio-economic areas, sponsored by different agencies and conducted by different, credible researchers—provides an abundance of evidence about the positive impact of qualified teacher-librarians and school libraries on children and adolescents. Funding is also more a matter of choice than economics.

One is left with the obvious question: is more evidence needed? The sad fact of the matter is that support for school libraries in those jurisdictions that conducted these studies has not increased; indeed, it has declined. So, yes, we need evidence from our own jurisdictions and to better understand our own beneficial behaviors but we need to connect that evidence to decision-making.

Evidence and Advocacy

Early on, I quickly realized that our positions were considered marginal, something I could not understand, let alone abide. I realized that we would need to be strategic and assertive in ensuring support for growth not only in the school community directly but also by developing partnerships outside the school with parents (1973a, 1984b), a formidable ally we tend to ignore. I started writing about strategies for change (1976), then “selling” the school library (1977b), moving to the term program advocacy (1980, 1990a; 1994); this work found its nexus in the integration of marketing and advocacy research with studies on effective curriculum implementation and applying this to finding favor for national guidelines and standards (1998a; 1999b)—the evidence was clear that it is “not about us”, it is not about public relations and publicity, to which we perennially revert (they don’t understand us; they don’t support us; they don’t know anything; so we need to do a better job of getting our message out—wrong!); it is all about connecting agendas.

If politicians demand hard evidence of the utility of school libraries and teacher-librarians, they can refer to myriad studies. Taken collectively, these studies demonstrate, with great clarity, that an investment in school libraries and teacher-librarians provides the sorts of dividends educators now seek from public funding: better student achievement, improved literacy and reading skills, and enhanced readiness to succeed in a post-secondary environment. Young people only go through our systems once—surely they deserve access to high quality, current and relevant resources, tools and technologies, and a team of teachers, including the teacher-librarian, dedicated to their learning.

The days of school libraries with mandated teacher-librarians are long gone and we need to get past thinking that “getting our message out” will lead to prescribed positions. School libraries do make a difference to student achievement but more when the teacher-librarian
collaborates as a knowledgeable and skilled teaching partner, in a culture of administrative support.

Certainly the world of teacher-librarianship has changed. Certainly we need to look at reinventing ourselves and our libraries (1998b; 2001; 2000b) as there are new political realities and considerations. We also need to stand back and learn from our past; we face similar dilemmas today but have newer insights to apply for beneficial practices (2002b).

**New and Emerging Technologies**

Now, to return to the themes of this conference: Cyberspace, D-world, E-learning: Giving Libraries and Schools the Cutting Edge. As the organizers state: “The importance of schools and libraries as the centers for the transmission of heritage and for breaking new ground in human civilization goes without saying. School libraries have been playing a pivotal role as learning resource centers for a long time. Today their place in the e-learning environment is becoming more prominent. Given their centrality, it is vital to examine how school libraries have adopted new communication technologies, and adapted to the digital world.”

If indeed the focus, as stated, is to generate guidelines for the effective use of newly developed digital technologies in an e-learning environment, I would suggest that we return to our foundations as effective use can only take place if new technologies are used when they are most appropriate for the intended learning purpose. If the teacher-librarian acts alone, without collaborating with colleagues, we might remind ourselves that the evidence on student learning is clear that it doesn’t really matter whether information literacy skills and strategies are taught by the teacher alone or the teacher-librarian alone. It is only through collaboration, through the integration of teacher knowledge of students and content and teacher-librarian knowledge of resources and information literacy, that learning is positively impacted.

To comment on the sub-themes:

First, **New Communication Technologies and School Libraries**: With the new wave of Web 2.0 on the world stage students may be more familiar and skilled in working with its tools and attractions, including RSS, Wikis, Podcasting, P2P, Blogs, etc. Indeed this may be true, and if we take our research-based role as staff developer (1999a) seriously we will find ways to engage students as collaborators, as teachers in the learning community.

Second, **Collaborative Teaching and School Libraries**: Collaborative teaching brings together school librarians, teachers of the same and other schools, and even other institutions from other countries, to perform teaching tasks. Yes and the principles of collaboration remain the same.

Third, **e-Learning and School Libraries**: Digital learning environments make it possible for students to interact with teachers and fellow students via teaching websites and related facilities. Indeed, the possibilities are endless yet opportunities need to be presented in ways that engage teachers as they ultimately make the instructional decisions and have the power to affect change.

Fourth, **Interaction between the Digital Library and e-Learning**: School libraries have taken big steps towards becoming e-learning resource centers. They have acquired substantial e-learning materials, have structured teachers' teaching websites, and have made tremendous efforts to integrate digital libraries with e-learning systems. While extremely valuable for
teaching and learning, the management of systems is ultimately not as valued as the collaborative teacher role. Decade after decade has shown us that vision, voice and visibility as teaching partners provide a better chance for continued employment and available resources.

Lastly, *New Reading Behavior and Information Literacy for Teachers and Students: It is vital to address how an ever evolving digital world impacts on two of the most critical activities taking place in school libraries: reading and information searching.* There is perhaps considerable irony in the fact that reading has gained renewed international attention and information searching is a regular part of the school day while teacher-librarian positions continue to disappear. Some forget that technological fluency still requires reading from a screen. Some forget that the research on information searching suggests that teachers overestimate student search abilities and capabilities and teacher-librarians overestimate student content knowledge for framing searches; both tend to overestimate student question-asking abilities. While there is no question about the next to be knowledgeable about newer technologies and to stay abreast of new developments, this final and more traditional theme may yet be our best alternative for demonstrating our knowledge, abilities and impact.

**Back to the Future?**

The foundations for teacher-librarianship have not changed, only the environment and the specific tools with which we work. Our future will be based on, and in,

♦ a clear statement of purpose about our core functions and uniqueness,

♦ recognition that the program is a partnership of principal, teacher, teacher-librarian and funding agency,

♦ role clarification for teacher-librarians with an appropriate education to enable implementation of a leadership role,

♦ collaborative program planning and teaching,

♦ flexible scheduling,

♦ integration of information literacy with classroom instruction with effective assessment measures,

♦ a school-based continuum of information strategies and skills,

♦ comfort and skill with new and emerging technologies, and the ability to integrate as fitting and to teach and develop others and move on; and

♦ effective and ongoing advocacy, meaning building relationships with decision-makers and connecting agendas, ours and theirs, recognizing the importance of theirs.

We have always been good at these things and there is no reason why this cannot continue into the future. After all, that has always been our professional promise and our personal commitment. Teacher-librarians who know and understand the research undergirding our profession know the means by which we have a positive effect on student achievement—and surely *that* is the bottom line.

Our environments change. Our tools and technologies change. Our dilemmas however remain constant. Our foundations remain constant. Using our research base, our foundational principles, to address dilemmas and manage in changing environments, will enable us, as it has in the past, to continue to make a difference in the quality of experiences that teachers and young people have in our schools.
I thank you for this indulgence and this opportunity for reflection on our past, present and future.
References


Haycock, K. (2000a). Information literacy as a key connector for all libraries: What all librarians can learn from teacher librarians. In D. Booker (Ed.), *Concept, challenge, conundrum: From library skills to information literacy; Proceedings of the fourth national information literacy conference conducted by the University of


Parrington, R. (2007, May 19/20). [Commencement Address]. Speech presented to the convocations of the San Jose State University School of Library and Information Science, San Jose, CA/Fullerton, CA.

Author Note
Ken Haycock has played most roles in public education—teacher, teacher-librarian, department head, school principal, senior education official, university professor. He has also been an elected school board president and municipal councilor. Dr. Haycock is a past president of national and international library and education associations and is recipient of numerous awards for research, teaching and service.