

Designing An Innovative School Library Environment To Facilitate 21st Century Literacy Skills.

DR. Harper, Meghan Sarah

School librarians have an unprecedented opportunity to assume an instructional leadership role and create a facility that promotes instructional collaboration, inquiry and collaborative learning that will have a dynamic impact on academic achievement. Through the facilitation of these activities, school librarians provide a vital connection to student acquisition of 21st century literacy skills.

The construction or redesign of a school library space, both physically and virtually, enables the school librarian to demonstrate leadership, professional knowledge and commitment to engage stakeholders in the learning process. School librarians as leaders must thoughtfully manage the process of evaluating existing needs of their stakeholders and prepare a space that will be flexible and innovative for future learners. The physical and virtual design must be multi-functional to promote a participatory learning environment now and in the future.

For many school librarians and their stakeholders envisioning the school library as a *learning commons* is the answer to developing a space that will support and facilitate collaborative learning and instruction. At the heart of the learning commons is the idea that a flexible space can support multiple types of activities. According to *Educause*, a commons space begins with an analysis of student needs considering the activities and work that should be supported. A key concept of establishing a learning commons is the types of social engagement the space will support.

“...the successful learning commons does not depend solely upon adaptable space configuration or the latest technological gear. Its strength lies in the relationships it supports, whether these are student-student, student-to-faculty, student-to-staff, student-to-equipment, or student-to-information. Effective learning commons are alive with the voices of students working together, establishing the kinds of connections that promote active, engaged learning.” (Educause, 2011)

. A learning commons encompasses the multi-functionality of a library, lab, lounge, and collaborative space that will ideally support real-time learning and instruction in addition to virtual, mobile, and online learning. The concept of a learning commons is likely to be one that school librarians can garner support for from stakeholders as it has stakeholders’ as the focus. The heart of the learning commons is meant to be an evolving, non-static ideal flexible learning space. As student’s learning needs change, so will the space and the services provided. The library’s virtual space will be center stage in the physical commons area.

Initial challenges, such as those that appear in most redesign projects, have cost as their root: the cost of providing new technology, equipment, and services, and the cost of retrofitting existing infrastructures to support technology and collaborative learning. Another challenge to implementing a learning commons is the lack of a standard model. For some, the obstacles include knowing which services to offer among a myriad of options, time, and knowledge acquisition in order to make the most informed decision, based on the unique needs of the school and its stakeholders. School librarians can begin their deliberations about creating their own learning commons with some reflection upon their students’ learning, 21st century literacy skills. Creating a library facility that incorporates the purpose and design of a learning commons may best suit the 21st Century learner. School library design should be based on what is known about

how children learn, spaces that are developmentally appropriate, incorporate universal design principles and incorporate the latest research in brain development. Incorporating universal design principles ensures that the library space will be inclusive for all individuals.

School librarians are compelled to address common themes and issues associated with innovations in technology that have influenced how students are accessing, evaluating, and using information increasingly from a host of mobile devices. The BYOD or bring your own device movement has brought forth new challenges in policies and practices of accessing information in schools. In *Teaching 21st Century Skills*, author, Beers, (2011) suggests, “The 21st Century requires us to create a generation of thinkers, learners who think creatively to solve problems and who collaborate with others at home and in the workplace. The ability to learn and create new ideas is essential for the 21st Century.” Emphasis on collaborative learning and providing the space for collaborative use of technology to support student creativity has led to many libraries developing *makerspaces*. Makerspaces are another non-standardized, learner-centered space, not easily defined because the activities and spaces for makerspaces vary widely. However, a common purpose of makerspaces is instruction, empowerment, and centered on creativity utilizing technology.

Hull and Nelson (2009) succinctly state in *The Future of Literacy Studies* what it means to be 21st-century literate: “Being able and willing to communicate and understand across differences in language and other modes and media for communication, in ideology, in culture and in geography is at the heart of what it means to be literate now.” School librarians need to survey their school libraries with a fresh perspective, and consider the emphasis of 21st century literacies. 21st century literacy skills include information literacy, media literacy, digital literacy and transliteracy. When considering how to create the physical and virtual space that will

facilitate 21st century skills, it is helpful to understand how these literacies are enacted in the school library. Information literacy is considered by many school librarians to be a foundational skill for students as they synthesize meaning from abundant information sources and formats available from a wide range of information creators. The American Library Association defines information literacy as the “set of abilities requiring individuals to recognize when information is needed and have the ability to locate, evaluate, and use effectively the needed information” (ALA, 2000) Information and media literacy are often considered the filters for which students evaluate and interpret information. Media literacy has become a key component to 21st century literacy, as media has proliferated to the extent that media accompanies the majority of information students’ access in the school library. Media literacy was defined by the Aspen Media Literacy Leadership Institute in 1992 as, “the ability to access, analyze, evaluate and create media in a variety of forms” (Center for Media Literacy, 2011). The definition has evolved in the two decades since to include an understanding of the role of media in society and an emphasis on students as media creators rather than merely consumers of media. The school library that has adopted a learning commons approach may be the most effective environment for assisting students with these important skills that will be applicable throughout their life.

Digital literacy is defined as “the ability to use the technology available to accomplish given tasks, demonstrating skills and knowledge. Youth are able to find the information they need, analyze the appropriate materials, and even evaluate which media is the right one for the given task.” (Jenkins, 2009)

School librarians create opportunities for students to experience a variety of media in order to hone their discerning digital literacy skills about choosing the best medium to use to accomplish their goals. Media literacy promotes responsible and ethical use of information both from within

the media and from other multimedia sources. Increasingly students are encountering information in digital content, thus digital literacy frequently is the *means* through which all other literacies may be applied. Digital literacy encompasses the skills of *creating* and *manipulating* information. Students must understand the power of using digital technologies as a medium to create change, and solve problems. Digital literacy is an essential building block for students to develop transliteracy skills.

Transliteracy, as defined by the Transliteracy Research Group is the ability to read, write, and interact across a range of platforms, tools and media from signing and orality through handwriting, print, TV, radio and film, to digital social networks. This definition may be an accurate observation of how students are engaging with information in your school library today. Students are access and engage with a wide range of informational mediums simply through the use of their school library's webpage or the physical and virtual collection of library resources, e.g. electronic databases, books, newspapers, journals, image collections or multimedia components.

Therefore, school librarians must consider how students are guided to, and supported through the use of a variety of platforms. Instruction that helps students learn and incorporate a range of evaluation skills and helpful aids for access and use of these platforms is a must to facilitate and support learning across disciplines with a graduated approach to complexity and application to real world concepts.

Librarians must organize their library space in order to enable multiple mediums to be accessed and used, as well as create and provide authentic learning experiences that will enable students to apply their 21st century knowledge and skills within and outside the physical library space.

School librarians must not only consider the various 21st century literacies but the changes in how students learn, as well. Researchers from the Beckman Center for Internet and Society at Harvard University describe students today as born digital, or “those who grow up immersed in digital technologies for whom a life fully integrated with digital devices is the norm.”

Similarly, the *Partnership for 21st Century Learners* states that “Twenty-first century learners are *always on, always connected*. They are comfortable *multitasking*. They are *multimedia oriented*. Their world is *Web-based*. They want *instant gratification*. They are *impatient, creative, expressive and social*. They are *risk-takers* who thrive in less structured environments.” Some overall design considerations include:

How to Manage Change

How will you share your vision of the school library? How will you evaluate learning needs and gather input from your stakeholders? How will you communicate and share the success of facility design changes in your school?

How Teachers Teach

How does collaborative instruction occur in your facility? How does your virtual space support and connect to your physical resources and space? What types of “spaces” are needed to support instructional practices? What types of student learning assessment is conducted, how often, and to what end?

How Students Work

What is the nature of student collaboration? How do students create and consume products of teaching and learning?

Considerations include how students work within the library, between the classroom and library, outside of school within the community, outside of school with other local libraries, and virtually with other students and teachers.

Resources

How are resources accessed? How are they organized? What is the support infrastructure for use of resources in and out of the library facility? How are resources organized virtually? How are resources and services connected? What is the nature of communication about available resources and services? What types of student activities are supported by the available physical and virtual resources?

Planning for a change in your facility whether it is a wholesale remodel or a simple reorganization and facelift presents opportunities to share your vision of the library and create advocates of your program. Although it may be expedient to dive in and begin rearranging furniture, it is important to capitalize on the advocacy building opportunities a facility design may inspire. Garnering support, soliciting opinions and involving the library community in the design will increase interest and attribute greater value to the library program. This process will also enable the school librarian to demonstrate how they have systematically and conscientiously documented the need for an improved space that will meet the needs of today's students. Not only should your new space support collaborative learning, the process of design should be collaborative and inclusive of all of your library stakeholders.

Anticipating the conclusion and success of the redesign project serves as a natural guide to documentation of the redesign process and promotes a transparency to the design process. School

librarians are advised to strategically plan how the “success” of the project will be communicated with library stakeholders, supporters, and advocates.

Designing school libraries that serve multiple ages of students at varying levels of cognitive, emotional, social, and physical development is challenging. Librarians must be adept at engaging the students, whether primary age or young adult, to determine their information needs and provide them with instruction that is developmentally appropriate. The following chart details typical child behaviors and tips for librarians for working with children at varying ages and abilities. Library design should consider the developmental stages of children and the space should be flexible to incorporate library resources and services that will accommodate developmental differences.

Chart 2.1 Developmental Characteristics of Children		
Social and Emotional Development	Intellectual Development	Ideas for Librarians
Ages 3-5 <ul style="list-style-type: none"> • Can cooperate • Experiences and copes with feelings, emotions appear to be all or nothing • Symbolic representation of self begins • Self-centered egocentric 	<ul style="list-style-type: none"> • Cannot sequence • Understands some abstract concepts • Cannot tell “how many times” • Understands family relations • Can tell a story with a length of 4 to 5 words • Cannot separate fantasy from reality 	<ul style="list-style-type: none"> • Provide activities with simple concepts • Point to text when speaking • Add audio to written directions
Ages 5-7 <ul style="list-style-type: none"> • Being friends becomes increasingly important, although feelings of independence continue to develop • Begins seeing things from another child’s point of view, but still very self- 	<ul style="list-style-type: none"> • Understands that print “tells” a story • Increased problem-solving ability • Begins to organize information to remember • Can begin to understand 	<ul style="list-style-type: none"> • Help children explore their world • Invite community helpers to the library • Provide plenty of failure free activity choices • Provide open-ended activities

<p>centered</p> <ul style="list-style-type: none"> • Finds criticism or failure difficult to handle and may seem very hard on themselves • Views things as black and white, right or wrong, with very little middle ground • Begin to understand consequences of their behavior • May become upset when behavior or school-work is ignored 	<p>time and the days of the week</p> <ul style="list-style-type: none"> • Develops a basic vocabulary • Asserts personal choice in decision-making 	<ul style="list-style-type: none"> • Role model activities • Provide opportunities for practice • Offer limited choices
<p>Ages 7-9</p> <ul style="list-style-type: none"> • Develop abilities to behave appropriately and gets along with others • Begins to understand consequences of own and others' behavior • Eagerly will take on tasks and activities likely to be successful, but avoids risks • Judges success or failure based on adult responses 	<ul style="list-style-type: none"> • Developed abilities of thinking and speaking • Master reading skills and use math in more abstract ways • Reading may become a major interest and start reading for a variety of purposes • Deepens understanding of cause and affect • Increased ownership in decision making 	<ul style="list-style-type: none"> • Tell stories with lots of details • Work on projects and make things • Provide failure free activities • Allow students to take ownership • Offer multiple choices
<p>Ages 9-11</p> <ul style="list-style-type: none"> • Enjoys being a member of a group • May belittle or defy adult authority 	<ul style="list-style-type: none"> • Interested in reading fictional stories, magazines, and how-to-projects books • Develop special interest in collections or hobbies • May be very interested in discussing a future career • Fantasizes and daydreams about the future • Capable of understanding concepts without having direct hands-on experience • Ability to manipulate 	<ul style="list-style-type: none"> • Provide opportunities to teach others • Provide opportunities to help out with real skills used in the library • Provide time and space for an older children to be alone. Time to read, daydream, or do school work uninterrupted • Encourage participating in groups to encourage skill developments • Provide opportunities for older children to play games of strategy (checkers, chess, and

	thoughts and ideas, but still need hands-on experiences	monopoly) <ul style="list-style-type: none"> • Provide a wide selection of reading materials
Ages 11-13 <ul style="list-style-type: none"> • Develop the ability to work cooperatively, and can see the worth of other's viewpoints • Becomes committed to their beliefs and personal views of the world • Start to question adult authority • Define self in terms of pinions, beliefs, values and expand sense of self by attempting to copy the culture • Sensitive to criticism and display feelings of success or failure 	<ul style="list-style-type: none"> • Does some abstract reasoning • Continues to broaden knowledge • Uses language to clarify thinking and learning, often likes jokes and worlds with double meanings • Read for an increasing variety of purposes • Choose from a wide range of reading materials • Increasingly able to read critically and to detect inconsistencies in argument • Ability to persist with longer and more complex text • Starts plans for the future and career aspirations 	<ul style="list-style-type: none"> • Wide variety of informational services • Use humor with activities to keep interest • Offer varying levels of text complexity • Provide future and career materials • Offer multiple presentation choices • Offer opportunities to provide input in decision-making
14-18 <ul style="list-style-type: none"> • Uncertain about making good decisions and depend on their parents to help • Take on more responsibilities including work and extracurricular activities • Need time alone and with others • Are not willing to ask for help • Can be very abrupt or have garbled speech 	<ul style="list-style-type: none"> • Thinks more abstractly and understands more complex issues • Plans for the future • Wants information in one or two sources 	<ul style="list-style-type: none"> • Provide opportunities for dialogue • Very important for teens to talk and be listened to • Be sure to follow up and check back with teen library users • Library staff needs to reduce frustration whenever possible • Solicit opinions • Involve in decision making • Offer multiple accessibility options

(Harper, 2011, pgs.34-35)

Creating spaces that meet the needs of teens age 14-18 can be challenging. Teens experience phenomenal change physically, emotionally, intellectually and socially. Thus, developing space to accommodate, facilitate and support growth and positively influence academic achievement is essential. Authors Feinberg and Keller suggest, “teens come to the library for contradictory purposes and alternate between different sets of activities. They occupy a variety of postures...”

A fabulous resource for designing teen space is a set of guidelines developed by the American Library Association’s Young Adult Library Services Association. The national *Teen Space Guidelines* were intended to be, “a tool for evaluating a public library’s overall level of success in providing physical and virtual space dedicated to teens, aged 12-18.” While the guidelines were developed by a YALSA taskforce with opportunities for public comment, one of the goals of the guidelines was to spur conversation about “the importance of dedicated physical and virtual teen spaces for their continued engagement, growth and achievement”. For example, *Guideline 8.0 Ensure the virtual space reflects 21st century learning standards* includes 13 points including but not limited to “support the development of multiple literacies including digital, visual, textual and technological informational navigation and use”, and “use creative and artistic formats to express personal learning.”

The guidelines are available virtually and in a convenient Pdf. document for review and distribution from the website, <http://www.ala.org/yalsa/guidelines/teenspaces>

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Foreword

These guidelines were created in 2011 -2012 by a task force of the Young Adult Library Services Association (YALSA) with feedback from the library community achieved through a public comment period in the fall of 2011. Members of the task force were Katherine Trouern-Trend (chair), Audrey Sumser, Kathy Mahoney, Caroline Aversano, Samantha Marker, and Kimberly Bolan Cullin. YALSA's Board of Directors adopted the guidelines on May 24, 2012.

Review Process

In order to finalize the guidelines, the taskforce presented a draft document to YALSA'S Board of Directors in June 2011. At this meeting, the taskforce solicited feedback on the draft

The feedback was carefully considered by the Taskforce; additions and revisions have been made accordingly. This draft document was approved for dissemination via a call for public comments period on Oct. 14, 2011. After the public comment period closed, the taskforce reviewed the feedback received and refined the draft guidelines as appropriate. The Teen Spaces Guidelines Taskforce wishes to thank the library community for their contributions to this document. It is intended that the National Teen Space Guidelines will be reviewed for revisions every five years.

Introduction

This is a tool for evaluating a public library's overall level of success in providing physical and virtual space dedicated to teens, aged 12-18. Potential users of these national guidelines include library administrators, library trustees, teen services librarians, community members and job-seekers hoping to assess a library's commitment to teen services. Not every element of the guidelines may apply to every public library situation, but the guidelines can serve as a place to begin the conversation about what constitutes excellent public library space for teens.

Teens experience rapid physical, emotional and social changes while developing their intellectual capabilities and personal values, understanding and accepting their sexuality, and identifying their educational and occupational options. Libraries are vital to today's teens in order for them to achieve a successful transition from childhood to adulthood. They offer the resources and the environment that foster positive intellectual, emotional and social development of tomorrow's adults. All of these factors contribute to the need for distinct teen spaces, both in-library and virtually. The national guidelines that follow are intended for all library personnel working with and for teens, so they can fully understand the mission of library service to this frequently underserved age group and the importance of dedicated physical and virtual teen spaces for their continued engagement, growth and achievement.

The mission of the Young Adult Library Services Association (YALSA) is to expand and strengthen library services for teens. Through its member-driven advocacy, research, and professional development initiatives, YALSA builds the capacity of libraries and librarians to engage, serve, and empower teens and young adults. YALSA is a subspecialty of the American Library Association, the world's largest and oldest library organization, and a financially stable 501(c)3 not-for-profit.

To learn more about YALSA or to access other national guidelines relating to library services to teens, go to www.ala.org/yalsa.

Guidelines for Physical Space

Overall, redesigned or new space should be multipurpose, flexible and reflect the interests and developmentally appropriate behaviors for the students served. The same can be said of the furniture, the technology and resources that fill the spaces both physically and virtually. The following list of suggested activities will pave the way for creating your ideal school library space.

Phase 1:

1. Determine if you will be redesigning your space or beginning with a new space. Set a desired time frame or timeline for the design process.
2. Clearly articulate for those involved in the design process, the resources you will be able to commit to this process; this may be your time and energy, or that of your staff or a budget if one has been allocated.
3. Identify barriers as well as opportunities and advocates in the making.
4. Become involved in the information/communication loop if you are not the one initiating the process. Communicate your interest and professional knowledge to decision makers and key players.
5. Gather information, conduct your research this may include gathering data from your library stakeholders, conducting a needs assessment, align goals of the redesign project with the district, school, building, or library's mission and goals. This information gathering phase is an opportune time to consult with your fellow school library colleagues, be proactive, seek the advice of others, gather words of wisdom and identify best practices as well as those potential obstacles. Learn from the mistakes of others!
6. Articulate an action plan that includes a cost analysis, timeline and major goals of the project.

Phase 2:

1. Gather information about the current infrastructure, structural (window, doors, floor, ceiling and utilities available. Reminder, a significant consideration with redesigning space is how your library will be *powered-up* to accommodate a variety of mobile

technologies and plethora of digital content. Identify any immediate needed improvements and address any historical problem areas.

2. Identify and map space for zones of activity.



3. Do take time to determine measurements, square footage of furniture, technology (actual size), *pilot test* furniture and activities, and plan for mobility by designing a mock-up of the space. You can then have a birds-eye perspective and evaluate how changes in the space will affect access to resources, traffic flow, and support for multiple simultaneous activities. From this vantage point, access to power sources, logical placements of zone activities, safety and security issues are easily identified.

4. Furniture considerations should include flexibility, mobility, design aesthetics and sanitation (promoting a germ-free, healthy environment).



5. From this vantage point, the placement, location of furniture, zones can be manipulated, new arrangements tested, discarded or refined. One also has the opportunity to think creatively and practically about how students' senses will be engaged throughout the school library environment through lighting, seating, management of sound, and displays or exhibits of student work.

6. Additional considerations would include the implementation of "green" practices. Your redesigned space can serve as a role model for others, and educate your students and staff about ways they too can become more "green".

Phase 3:

1. Proceed with your timeline of activities. Gathering and documenting the change process over time with both anecdotal and formal assessment.
2. Celebrate your successes and share widely with others. Don't forget to keep those key decision makers informed and aware of the positive influences on student learning and achievement.

21st century school libraries need to be designed with the ubiquitous user in mind, accommodate and promote 21st century literacies and competencies for students, and must be collaborative, hands-on, and multifaceted in their design and in their delivery. Authors, Moss and Petrie (2002) concur, "Public spaces for children are designed for the childhoods children are living here and now, as well as creating relationships and solidarities between children, between adults and between adults and children..." , specifically, a space that supports relationships between and among your school library's most important stakeholders. Perhaps it is in your future to reimagine your school library as a learning commons for students. Ultimately, the best environment will be one that ensures learning is multisensory, engaging students' hearts and minds, and preparing students for real-world concepts and application in their lives.

Further reading:

1. American Librarian Association's annually produced volume of *American Libraries* that features "winning" designs of libraries. (Check online repository and not just the print volume.)
|American Libraries Magazine
2. WBDG Whole Building Design Guide: a program of the National Institute of Building Sciences
This site deals with the physical space and design of a library, as well as emerging issues to consider when designing your space and relevant building codes which will require your compliance.
http://www.wbdg.org/design/school_library.php

3. <http://www.ncef.org/resource-lists/librariesmedia-centers> - This list curated of the National Clearinghouse for Educational Facilities provides resources and information on the design and planning of K-12 school libraries and media centers.
4. <http://www.doug-johnson.com/dougwri/designing-digital-libraries.html> - Written by a school library professional and consultant, this article provides insight into common pitfalls in library design and how you can avoid them.
5. <http://www.designinglibraries.org.uk/?PageID=89> - Focuses on design information for school libraries, as well as providing information on how to furnish, relocate to, and photograph your newly designed area.
6. Brain Based Learning
<http://www.designshare.com/Research/BrainBasedLearn98.htm>
This site home to Design Share: the International Forum for Innovative Schools contains a recommended list of 12 design brain-based principles. It also has a wealth of other resources on innovative school design.
7. Universal Design Education
<http://www.udeducation.org/home.html>
This site serves as a resource for educators to incorporate universal design principles so that “all products and environments to be as usable as possible by as many people as possible regardless of age, ability, or situation.”

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