

Defining the Role of Literacy in the School Library of the 21st Century

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Abstract

There are many questions in the K-12 school library world that parallel the questions that are going on in the library world in general. Are libraries relevant in the 21st Century? Do our students need books in a Google world? If there still is a role for the library, what is it? The role of the school library has always been tied to the support of literacy across the curriculum but the definition of literacy is evolving with continued developments in technology. In an effort to understand the future of the K-12 library, we look at the evolution of the term literacy, current models for the school library's physical, virtual and curricular structures and how literacy relates to these structures.

Defining Literacy and Research Skills in the School Library of the 21st Century

Introduction

The library as an institution is undergoing a significant identity crisis as technology impacts how people discover, process and transmit information. The library used to be the central source for the dissemination of all facts. That function of the library has been fairly effectively replaced by smartphones and the Google searchbar. John Seely Brown states that “the need to memorize something is a 20th Century skill” (Brown, 2011). In his address to the California Library Association, Stephen Abram tells us that technology has become very good at answering the who, what, when and where questions (2011). If it is true that fact is something that is at everyone’s fingertips, then the curated collections of information that have been the model of the brick and mortar library are truly a thing of the past. What then, is the role of the library going forward?

Compounding the issue in the school library is the fact that the model of education itself is undergoing its own upheaval. Technology is allowing business to function in very different ways. No longer is a company’s entire workforce necessarily in the same city, region or even continent. Not only is competition for products and services global, but so is the competition for workers. With labour being happily done in economies with much lower costs of living, the up and coming North American workforce needs to offer something beyond basic skills (Friedman, 2005). Education needs to then step up and help youth develop a different set of skills for a knowledge economy. Sir Ken Robinson argues that a greater proportion of jobs that our students are graduating into are knowledge based jobs rather than manual labour. These jobs require

a different set of skills; they require critical-thinking, creativity, and problem solving skills (2009). Trilling and Fadel and the Partnership for 21st Century Skills agree (2009; 2011). Teaching content is something that our current education system is very good at. There is an entire industry of standardized testing that is evidence of this. Teaching intellectual skills is not as easy to assess and quantify as teaching content. Identifying the specific skills that are important to a vastly different world than the world that the teachers were educated in is even harder. In addition to dealing with what is taught, technology is having a significant impact on how we teach.

So how does this all impact the school library? How does the bastion of support for reading programs and book talks stay relevant in a new educational paradigm? To answer these questions, we need to look back at the historical role of the school library in its support for literacy. We need to know what literacy was to know how it has developed and then, we have to look at what literacy means now if we are to figure out if and how the school library has a role to play in the education of today's, and tomorrow's, student.

Historical Background

The school library's role in supporting literacy has evolved with the definition of the term. The library has traditionally performed the role of providing a curated collection of information to support student research. It has also supported literacy education through providing resources to practice and develop reading skills. As the definition of literacy has evolved, the library's role has expanded to include a curricular function of teaching research and technology skills that evolved as society developed new

methods of transmitting information. To understand what the role of the library is in the school of the 21st Century, we must first understand where our concept of literacy has come from, what it is likely to be currently. We must also understand what the library's role has been and currently is in supporting the evolving definition of literacy.

Literacy as a concept has been developing since at least 1880 when the term was first published in the *Atlantic Monthly* (Oxford English Dictionary, 2011). The concept equated to being well-read and having a particularly well cultivated ability to write. There seems to be a distinction at this point between literacy and the ability to read and write at a basic level. Literacy was seen to be the privilege of the elite, not the commoner. In fact, the *Atlantic Monthly* article is an argument *against* promoting literacy to the masses (1880). As compulsory schooling was still a new thing, libraries in schools were not common and generally lacked support. The role of the library in this environment was inconsistent if not unclear (Rubin, 2010).

Between 1915 and 1925 there was an effort to develop standards for school libraries in the United States. This resulted in the writing of two reports by Charles C. Certain in 1920 and 1925 setting standards for the Secondary and Elementary level libraries. Although Certain focused on many areas of the library including staffing, collections, physical space and librarian training, of particular note is the curriculum prescribed in his 1920 report, *Standard Library Organization and Equipment for Secondary Schools*. In this handbook, he advises that the librarian, over a minimum of twelve lessons per year, teach the following topics:

1. The use of books for educational guidance...
2. The use of books as tools...
- 3.

The use of books as a means of recreation, amusement and inspiration...4. "Esprit

de corps” in handling books as public property...5. Relation of high school and public libraries. (National Education Association, 1920, pp. 21-22)

These same basic principles are very similar to the curricular role of the school library almost 100 years later. The educational use of books and the use of books as tools point to research and information literacy where as the recreational use of books is very much like today’s general literacy and love of life-long reading and learning role. The National Educational Association (NEA) and the American Library Association (ALA) continued promoting and refining these standards through the 1930s and 40s (Roscello, 2004).

Through the sixties, more audiovisual resources were being added to library collections. The ALA, NEA and the American Association of School Libraries (AASL) published a new set of standards for “School Media Programs” (Midland, 2008) that established a direction for inclusion of expanded resources in the traditional school library setting. These resources included video, filmstrips and audio recordings and the devices that were used as viewing or listening tools. In 1969, the AASL and Department of Audiovisual Instruction revised the 1960 standards to include reference to “closed-circuit television, computer-assisted instruction, and dial access information services” (Johnson, 1969) that truly began to set the stage for the impact technology would have on education in the coming decades.

Simultaneously, the definition of literacy started to expand. As early as 1943, *American Magazine* published an article by Henry A. Wallace using the expression “economic literacy” (p. 208). We also see discussion of literacy regarding television and musical literacy in 1962 and 1977 respectively (Oxford English Dictionary, 2011). The expression “information literacy,” of particular relevance to current thinking in education,

was first used by Paul Zurkowski in 1974, then president of the Information Industry Association (Erdelez, Basic, & Levitov, 2011). The AASL defines “information literacy” as “the ability to find and use information” (American Association of School Librarians, 1998). What all of these uses of the concept of literacy share is that they all speak to a fluency with the language around and the ability to work with a specific discipline’s concepts. As each area of literacy often have very different skills, terminology and often symbol sets (ie. music, math), they were defined as separate forms of literacy.

Current Definitions

Technology as a medium of communication and information delivery has continued to impact the definition(s) of literacy. The printing press changed access to literature and information and made literacy something available to the masses. Radio, film and TV changed the way a message was conveyed and necessitated a change in the meaning of literacy. People were required not only to be able to read and write, but it became important to be a critical media consumer. The advent of the personal computer and subsequent development of the Internet had an equal if not greater impact on the definition of literacy as information and communication became available everywhere cheaply and easily. Along with previously mentioned literacies, new concepts of literacy emerged. Langford lists a set of emerging literacies that include “technological, critical, business, traditional, network, basic, scholarly, environmental, library, electrographic, cultural, moral, e-literacies, digital, information, and even new basic literacy” (1998). Loertscher, Koechlin, and Zwaan list seven literacies that are important to education: information literacy, media literacy, visual literacy, digital literacy, critical literacy,

cultural literacy and multi-modal literacy. They also mention the concept of transliteracy, a concept that is dealt with in more detail below that attempts to find commonality in the ever-growing list of literacies (2011, p. 55).

The problem now becomes, does the term literacy mean the same thing when it is paired with other concepts? Does literacy mean the same when used in the expression “financial literacy” as it does in “media literacy?” Are there really multiple literacies that the school library needs to concern itself with or is there a commonality to all literacies that can be used as a guiding element for curricular and program building purposes? If there are multiple literacies, is there a literacy or a set of literacies that becomes more important than the others? There are certainly different theories regarding the commonality of the current definitions of literacy. We will look at two prevalent types of literacy - information literacy and media literacy - and a theory of commonality between literacies, transliteracy.

Information literacy is likely the most developed concept of literacy that relates to current technology trends. Although the term information literacy has been used for decades, it has come into popular use in relation to libraries and education in the past two decades. The exact definition of the term is still in flux. In 1992, Doyle presented a definition that states that “information literacy is the ability to access, evaluate, and use information from a variety of sources” (p. 2) as part of the *Final Report to National Forum on Information Literacy*. This definition was generated through consultation with more than 50 leaders in education, business and government across the U.S., Canada and Puerto Rico. It provided the basis for much of the work that was done in the ensuing years by such groups as the AASL (1998), and the ACRL (2000). The AASL then

published a new document in 2007 entitled *Standards for the 21st Century Learner*. The term “information literacy” in this document is used as a subset of 21st century skills.

They state the following:

The definition of information literacy has become more complex as resources and technologies have changed. Information literacy has progressed from the simple definition of using reference resources to find information. Multiple literacies, including digital, visual, textual, and technological, have now joined information literacy as crucial skills for this century. (p. 3)

The separation of information literacy in this statement, while not unique to the AASL document, is important in that it recognizes that information literacy is separate from areas that it overlaps such as digital and technological literacy. Herring, noted Scottish authority on information literacy in schools, proposes that information literacy is “a critical and reflective ability to exploit the current information environment, and to adapt to new information environments” (2011). This definition focuses on the mindful use of information that is transmitted via all forms of past, present and future technology.

What is common to all concepts of information literacy is that it involves intelligent use of information from all available sources. The focus is on the information itself rather than the medium of transference. An informationally literate person knows how to access appropriate information, can evaluate its credibility, and put it to effective use regardless of the platform or method of conveyance. An informationally literate person will be able to access, evaluate and use resources in physical written, digital, video, and audio forms.

Digital literacy and technological literacy are similar to information literacy in that they primarily deal with the access and use of information via technological means but focus on the specifics of the technology itself rather than evaluation and use of the information accessed. Media literacy, however, looks at the way a message is conveyed through aural and visual media. Barbara Stripling defines media literacy as “the ability to ‘read’ and interpret information presented in visual and oral formats” (2010, p. 19). This type of media literacy describes how we become critical consumers of messages that are delivered to us via television, radio, and the internet. It talks about deciphering such things as bias and hidden agendas in advertising, news reports and other broadcasts of information. Henry Jenkins, principal investigator with Project New Media Literacies and Provost Professor of Communication, Journalism, and Cinematic Arts at the University of Southern California, tells us that

increasingly, the word, literacy, has moved from reference to the specific practices associated with text to a more generalized capacity to decipher the signs and symbols of our culture. The Media Literacy movement has a long history of extending the concept to refer to our capacity to interpret and communicate through audio-visual media. (2008)

His current definition of media literacy deals with not only the ability to interpret but also the ability to communicate using current participatory media. This is akin to the difference between being able to read a language as compared to being able to read, write and speak it. Most would agree that the former is not full literacy.

This layer of participatory media literacy is taken one step further in the work of Henry Rheingold who speaks of social media literacies. He divides social media

literacies into five sub-literacies: attention, participation, collaboration, network awareness and critical awareness (2010). Although many of the concepts involved in these categories are not new (his use of the term “crap detection” as a way of describing critical awareness comes from Hemmingway) the mode in which they are expressed is. The fact that we now have the capability of communicating in ways well beyond the written word open up a definition of literacy that is much closer to the original concept of reading and writing that we began with in the 19th Century. 20th Century literacy, at least in terms of non-written communication, involved the interpretation of broadcast of one-way messages. With social media platforms, literacy becomes “read” and “write” involving the written word, visual, audio and combinations of all three. For the first time in history, this depth of literacy is available to all.

The question that is begged from all of these multiple literacies is: are there any elements that unite these different literacies in a common definition? One approach to a unified definition is the concept of transliteracy. According to the Transliteracy Research Group, “transliteracy 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” (Thomas, 2011). The term comes from the verb “transliterate” that refers to the translation from one language with one alphabet to a language in another alphabet. The differences in alphabets necessitates a transfer of meaning where exact words many not translate exactly (Thomas, 2006).

As the field of transliteracy is relatively new, there remains much disagreement in term usage and whether it is a legitimate concept that helps the discussion of literacy. There are those that remain steadfast that there is value in talking about multiliteracies

and multimodality (Jewitt, 2008) and the “A reasonable objection to transliteracy” post at the *Libraries and Transliteracy* blog (Wilkinson, 2011) is an excellent example of how much disagreement still remains with regard to this concept. Having said this, the concept is gaining popularity as evidenced by increasing time being devoted to it in professional conferences. The 2011 AASL conference presented a session on transliteracy and will devote a two-day forum in the fall of 2012 entitled *Transliteracy and the School Library Program* (AASL, 2011). Whether the concept itself becomes part of daily parlance or not, it will be important for school librarians to focus as much on the commonalities between modes of literacy as the differences as new technologies continue to emerge that impact the way we manipulate information.

Curriculum

The underlying mission of all libraries is to promote literacy. Regardless of the specific task of any particular library, literacy is the basic requirement of use of any library therefore, it is in the library’s DNA to promote it. School libraries have a particular calling to the cause of literacy promotion due to their educational nature and the age of their patrons. Where an academic library can assume at least a basic level of literacy on the part of their students, a school library’s calling is to help develop those skills. How does a school library develop those skills given the variety of currently prevalent definitions of literacy?

The answer to this question lies both in curriculum and resources. The days of a library simply being a curated collection are long over, but what, specifically, is the role

of education in the school library? It is worth looking again at Certain's curriculum as it continues to resonate to this day:

1. The use of books for educational guidance...
2. The use of books as tools...
3. The use of books as a means of recreation, amusement and inspiration...
4. 'Esprit de corps' in handling books as public property...
5. Relation of high school and public libraries. (1920, pp. 21-22)

His reference to the recreational use of books is currently carried out through programs such as readers' advisory programs, author visits, book clubs and book talks. The school library has traditionally been a place where a life-long love of reading is engendered. The respect for resources and the relationship of the school library to the public and academic libraries is not as often exhibited in formal programs or curriculum but is a constant in the ethos of most school libraries. What is of interest is the manner in which Certain's concept of "books as tools" and "books for educational guidance" relate to modern day research methods.

The terms "library skills" and "research skills" are commonly used to talk about how one finds answers to questions in order to build knowledge. The term "library skills" generally refers to the organization, access and use of physical resources like books while "research skills" tends to refer to the use of physical and digital resources. The term "research skills" can also be used somewhat interchangeably with "information literacy" as in the case of Herring and his discussion of information literacy as a process (2011). There are a number of prominent approaches to teaching research in the school environment. The Big 6 model is a six-step process that helps students to define the task at hand, determine the best information seeking strategy, locate and access source

material, effectively use the information, synthesize the information they've found in a presentation, and evaluate the process to improve on it for next time (Wurster, 2011).

Another prominent voice in research methods pedagogy is Carol Kuhlthau who developed an information search process which is similarly broken into a number of stages:

Initiation – contemplation of the task; selection – of the topic; exploration – of all issues surrounding the topic; formulation – of a perspective; collection – of resources to support perspective; presentation – preparing to present findings; and assessment – reflection on the research process (2003). A third prominent voice in this discussion is Barbara Stripling. Stripling has been active in the AASL and ALA work on standards and curriculum and has developed an approach that she calls Inquiry-Based Learning that is a circular progression in six phases: the Connect Phase, Wonder Phase, Investigate Phase, Construct Phase, Express Phase, and Reflect Phase (2004).

At first glance, there are many similarities between each of the processes. As Stripling herself states, most models share six or seven common steps:

Tap into prior experience, background knowledge; Generate intriguing questions or problems that can be investigated; Develop a plan for investigation; Select resources—select, analyze, and evaluate information that addresses the questions or problems; Organize information, find patterns, draw conclusions and new understandings; Create demonstration of learning and share with others; Reflect on the process and product of learning [and] generate new questions. (2008)

Within these steps, there are many skills that need to be developed as part of the information literacy/research skills curriculum. In addition to learning to define research and plan an approach, there is the ever evolving-skill set of evaluating resources for

credibility and relevance. There is no end of texts devoted to evaluating online sources of information (Herring, 2011; November, 2008; Rand, 2010). Once the student knows that she has good information, additional skill sets are used to make sense of the information and then present her new knowledge in a meaningful way.

What is interesting about Stripling is that she makes a distinction between information literacy and inquiry. Her stance is that in a constructivist approach to education, inquiry emphasizes process where information literacy focuses more on a results-based approach to accessing, evaluating and using information (2008). In her view, information literacy is an important aspect of the larger process of inquiry. What this approach seems to be recognizing is that, in a learner-centred school environment, questions come as much from the student as they do the teacher. The traditional model of a teacher giving a class a research topic is becoming less common as student generated queries become a more standard method of exploring a topic. This concept of inquiry-based learning has gained significant influence through its inclusion in the AASL *Empowering Learners* document (2009a) and the adoption in other curricular documents such as British Columbia's *Points of Inquiry* document (2010).

School library curriculum then supports multiple literacies through a thoughtful approach to teaching research. Traditional forms of literacy – reading and writing - are implicit in all library use but other forms of literacy become critical when developing questions, collecting and evaluating resources and processing findings to produce presentations of newfound knowledge. Information literacy, media literacy, digital literacy and many other forms of literacy come into play in the course of a single research project. The curriculum of the school library program must then address the research

process in a meaningful way, whether it be through one of the research models discussed above or through some other well-designed process.

One cannot discuss the curricular role of the school library without addressing the collaboration necessary with classroom teachers. The library curriculum cannot exist in a vacuum. For it to have meaning and relevance to the student, it must be integrated into the curriculum of a student's courses rather than being appended as an extra. The AASL states in their *Standards for the 21st-Century Learner In Action*,

School librarians and classroom teachers will find that a collaborative approach to teaching to these standards is most effective because process skills are best learned in the context of content learning, and content is most effectively learned when the necessary learning skills are taught at the same time. (2009b)

In addition to students having access to both content and process experts, the simple fact that students have access to more than one teacher is key to any student-centred learning approach. One of the biggest challenges to encouraging students to work independently is the ability of the teacher to give each student the attention that they need. A collaborative approach provides students with experts in different fields, a variety of approaches and more individual attention than they would otherwise receive.

Implications for the Collection and Physical Space

Although the mission of the school library is primarily one of education, resources need to be in place to support that mission. One cannot support literacy without something to read. One cannot learn to use resources without a collection to use and a space to use them in. The library as a curated collection of books containing the

sum knowledge of humanity has been a resource for formalized learning and self-education from the first day that scrolls were organized in a collection. In the early 20th Century, librarians began to be hired to organize and plan school library collections (Midland, 2008) and it didn't take long for them to organize themselves to create some clear ideas of what a school library should look like. The Certain report of 1920 specified that books should be selected for school libraries that serve: "1. Educational guidance and local industrial, commercial and community interests. 2. Laboratory and classroom needs. 3. The general recreational and cultural needs of the pupils" (p. 20). The report also suggested that the better libraries should include such resources as slides, moving pictures, victrola records, posters and pictures (p. 14-15).

As the technology has changed and the definition of literacy has developed with it, the basic intents of the Certain report have remained consistent. The specifics regarding numbers and types of books have changed as reference material is often more current and easily accessed on line than from printed books and victrola records and film based moving pictures have been replaced with iTunes and YouTube, but the needs are the same. The most significant change is in the use of physical space. With less need for room for books, space can be used for patrons rather than storage. Certain recommended space for 10% of a school population for a reading room in addition to two to three rows of work tables seating six each (p. 13). The AASL offers two guidelines in its 2009 document *Empowering Learners* regarding resources that should be available within a 21st century school library: "The school library program includes flexible and equitable access to physical and virtual collections of resources that support the school curriculum and meet the diverse needs of all learners" and "The school library program includes a

well-developed collection of books, periodicals, and non-print material in a variety of formats that support curricular topics and are suited to inquiry learning and users' needs and interests" (2009a, p. 29). With reallocation of space to reduce shelving requirements, more space can be devoted to student reading and work space and access points for digital resources. What is interesting is the lack of guidance currently available in terms of specific recommendations for the physical design of the school library space. As one school library designer states,

How do you determine the best way to turn your library space into a learning center that's right for today's rapidly changing digital world? Take it from me, a long-time designer of school libraries, it's not easy. I've discovered that the things I used to labor over just five year ago don't seem as important anymore.

(Sullivan, 2011)

Most of the recommendations are more concerned with keeping space flexible rather than prescribing specific design elements (AASL, 2009a; Koechlin, Rosenfeld, & Loertscher, 2010). Ultimately, the physical impact of technology on the library space is that there is less room required for physical resources so that more can be allocated to patron use.

One approach to this physical use of space has been dubbed the learning commons. Hess and Ostrom describe the learning commons as a space, much like that of a town commons, where people gather around learning (2007). In this model, the library space becomes as much about finding information as it is about working with that information and sharing newly created knowledge with others. It has book-shelves, computers, flexible work spaces and presentation areas. Loertscher, Koechlin and Zwaan describe the learning commons thus:

As we enter the Learning Commons, our first impression differs greatly from the first impression on entering a traditional library or computer lab. Immediately, we notice a completely flexible learning space where neither computers nor books get in the way. If we were to come back in an hour, we might see a completely different configuration of individuals and groups of youth, adults, or both, busily working, consulting and collaborating. The buzz in the air is both purposeful and casual and it is a mix of learners, both adult and student, engaged in a wide variety of activities. (2011, p. 11)

An important aspect of the learning commons model, and most approaches to school library spaces, is the pairing of the physical space with a virtual space. The organization of physical resources, at this point in our history, has well-established protocols, but the organization of digital resources is an area that is changing with every new tool that emerges. When libraries started dealing with digital resources, whether web-based or server-based, a common access point was the library web site where the library staff would post links to all of the digital resources. These resources were often purchased database subscriptions and collections of web sites vetted by the library staff. This is still a common approach used in most public, academic and school libraries.

Because of the educational role that school libraries take on, their library web sites have tended to become more involved. In addition to providing access points to specific library services, many school librarians provide curated collections of material designed to help specific groups of students with specific tasks and classes. Often referred to as pathfinders, these lists of resource materials have traditionally been in print form but are more often than not, now in some form of digital space (Herring, 2011, p.

110-113). Joyce Valenza, school librarian at Springfield Township High School and active speaker, blogger and writer on all things library and technology, has had an interesting evolution with respect to the use of pathfinders. In 2007, she wrote on her blog that pathfinders need to move to a wiki platform. Her reasons included that wikis are collaborative in nature and that instead of limiting the creation of a pathfinder to the expertise of one person, multiple librarians can build common pathfinders and share expertise. She has recently taken this concept one step further to include students in the process of curating their own resources. Using tools such as wikis, LibGuides (Springshare, 2011) or Scoop.it! (Decugis & Rougier, 2011) students can easily share resources organized in ways that create meaning for them, rather than having a librarian, teacher or other adult make this meaning for them (Valenza, 2011).

This process of having the learners become active in the library's digital space brings the concept back to the learning commons where the library, both physical and digital, becomes a space of participatory learning for all. Loertscher, Williams and others call this the "client-sided learning commons" where the learner drives the services and resources of the physical and virtual space (Loertscher & Williams, 2008). Literacy, in many forms, is supported through the ability of the learner to explore literature and information in a myriad of formats, use a variety of tools to manipulate and digest that information and present his newly developed knowledge to others in face-to-face and digital environments.

Conclusion

The use and model of the school library has been directly impacted as our definition of literacy has changed over the past 100 years. As we have moved from an emphasis on being well-read as individuals to a collaborative creationist philosophy of education motivated by expanded digital resources, the role of the library has shifted to match. Libraries started purely as collections of quality literature and developed through an expanded media collection to support learning to result in a concept of a hub of learning that is created around student and teacher need. It seems clear that as technology continues to change the way we communicate and share knowledge and ideas, the library will continue to adapt. The challenge for school libraries in the future will be in the continued focus on content while continuing to keep abreast of the continually evolving manners of delivering that content. The role of the library and the librarian may, in fact be separate from each other as the role of the school librarian becomes more involved in helping students learn to manage information rather than managing it for them. No doubt, there will always be some sort of role for the librarian in terms of large scale resource collection and curation, but the specifics of that job are already in flux.

References

- Abram, S. (2011). The future: Frankenbooks, social libraries and learning. *2011 SLIS lecture, San Jose state university, School of library and information science*. [Video podcast]. Retrieved from <http://itunes.apple.com/podcast/sjsu-slis-audio-video-podcast/id264386155>
- American Association of School Librarians. (1998). *Information literacy standards for student learning: Standards and indicators*. Chicago, IL: American Library Association. Retrieved from <http://www.ala.org/ala/mgrps/divs/aasl/aaslissues/infolit/informationliteracy1.cfm>
- American Association of School Librarians. (2007). *Standards for the 21st century learner*. Chicago, IL: American Association of School Librarians. Retrieved from <http://www.ala.org/aasl/standards>
- American Association of School Librarians. (2009). *Empowering learners: Guidelines for school library media programs*. Chicago, IL: American Association of School Librarians.
- American Association of School Librarians. (2009). *Standards for the 21st-Century Learner In Action*. Chicago, IL: American Association of School Librarians.
- American Association of School Librarians. (2011) Association Web Site. Retrieved from <http://www.ala.org/aasl/>
- Association of College and Research Libraries. (2000). *Information literacy competency standards for higher education*. Chicago, IL: The Association of College and Research Libraries. Retrieved from <http://www.ala.org/ala/mgrps/divs/acrl/standards/standards.pdf>

Atlantic Monthly (1880, November) The contributor's club: The prevention of literacy.

Atlantic Monthly 46(277) (p.722)

Brown, S. (2010) *Digital media: New learners of the 21st century*. St. Paul and Mill

Valley: Twin Cities Public Television and Mobile Digital Arts. (Available from

PBS <http://www.pbs.org/programs/digital-media/>)

Decugis, G. & Rougier, M. (2011) ScoopIt! [Web Software] Available from

<http://www.scoop.it/>

Doyle, C. S. (1992). *Outcome Measures for Information Literacy within the National*

Education Goals of 1990. Final Report to National Forum on Information

Literacy. Summary of Findings. Washington, DC: Retrieved from ERIC

Clearinghouse.

Ekdahl, M., Farquharson, M., Robinson, J., & Turner, L. (2010). *The Points of Inquiry: A*

Framework for Information Literacy and the 21st Century Learner. Vancouver,

Canada: British Columbia Teacher-Librarians' Association.

Erdelez, S., Basic, J. & Levitov, D.D. (2011). Potential for inclusion of information

encountering within information literacy models. *Information Research*, 16(3)

paper 489. Retrieved from <http://InformationR.net/ir/16-3/paper489.html>

Friedman, T.L. (2005) *The world is flat: A brief history of the twenty-first century*. New

York, NY: Farrar, Straus and Giroux.

Herring, J. E. (2011). *Improving students' web use and information literacy: A guide for*

teachers and teacher librarians. London, England: Facet.

Hess, C., & Ostrom, E. (Eds.). (2007). *Understanding knowledge as a commons: From*

theory to practice. Cambridge, MA: MIT Press.

- Jenkins, H. (2008, November 20). The new media literacies: An introduction, *Confessions of an aca-fan: The official weblog of Henry Jenkins*. Retrieved from http://henryjenkins.org/2008/11/the_new_media_literacies_an_in.html
- Jewitt, C. (2008). Multimodality and literacy in school classrooms. *Review of Research in Education, 32*(1), 27.
- Johnson, M.R.A. (1969) Facilities and standards. *Library Trends, 17*(4), 362-373.
- Koechlin, C., Rosenfeld, E., & Loertscher, D.V. (2010) *Building a learning commons: A guide for school administrators and learning leadership teams*. Salt Lake City, UT: Hi Willow Research and Publishing.
- Kuhlthau, C. C. (2003). Rethinking libraries for the information age school: Vital roles in inquiry learning. *School Libraries in Canada, 22*(4), 3. Retrieved from EBSCOhost
- Langford, L. (1998). Information literacy: A clarification. *School Libraries Worldwide, 4*(1), 59-72. Retrieved from Library Lit & Inf Full Text database.
- Literacy. (2011) In *Oxford English Dictionary* (3rd ed.). Retrieved from OED Online.
- Loertscher, D.V., Koechlin, C., & Zwaan, S. (2011) *The new learning commons: Where learners win (2nd Ed)*. Salt Lake City, UT: Hi Willow Research & Publishing
- Loertscher, D., & Williams, R. (2008). "Client-side information literacy: The challenge of a new century," *SJSU SLIS audio/video podcast*. [Audio podcast]. Retrieved from <http://itunes.apple.com/podcast/sjsu-slis-audio-video-podcast/id264386155>
- Midland, S. (2008). From stereopticon to google: Technology and school library standards. *Teacher Librarian, 35*(4), 30-33.

- National Education Association of the United States., & Certain, C. C. (1920). *Standard library organization and equipment for secondary schools: Report of a committee of the National Education Association on Library Organization and Equipment*. Albany, NY: University of the State of New York.
- November, A. (2008) *Web literacy for educators*. Thousand Oaks, CA: Corwin Press.
- The partnership for 21st century skills*. (2011). Retrieved from <http://www.p21.org>
- Rand, A. D. (2010). Mediating at the student-wikipedia intersection. *Journal of Library Administration*, 50(7), 923-932. doi:10.1080/01930826.2010.488994
- Rheingold, H. (2010). Attention, and other 21st-century social media literacies. *Educause Review*, 45(5), 14.
- Robinson, K. (2009) *The element: How finding your passion changes everything*. London, England: Penguin.
- Roscello, F. (2004). Standards—our earliest history. *Knowledge Quest V. 32 No. 4 (March/April 2004) P. 6-8, 32(4), 6-8*.
- Rubin, R.E. (2010) *Foundations of library and information science* (3rd ed.) New York, NY: Neal-Schuman
- Springshare LLC. (2011) Springshare: LibGuides [Web Software]. Available from <http://springshare.com/libguides/>
- Stripling, B. K. (2004). Using inquiry to explode myths about learning and libraries. *CSLA Journal*, 28(1), 15-17. Retrieved from EBSCOhost.
- Stripling, B. (2008). Inquiry: Inquiring minds want to know. *School Library Media Activities Monthly*, 25(1), 50-52. Retrieved from EBSCOhost.

- Stripling, B. (2010). Teaching students to think in the digital environment: Digital literacy and digital inquiry. *School Library Monthly*, 26(8), 16-19. Retrieved from EBSCOhost.
- Sullivan, M. (2011). Divine design. *School Library Journal*, 57(4), 26-32. Retrieved from EBSCOhost.
- Thomas, S. (2006) *Social text: Participatory media literacy*
https://www.socialtext.net/medialiteracy/sue_thomas_july_6_3_18pm
- Thomas, S. (2011). *Transliteracy.com*. retrieved from
<http://nlabnetworks.typepad.com/transliteracy/>
- Trilling, B. & Fadel, C. (2009). *21st century skills: learning for life in our times*. San Francisco, CA: Jossey-Bass.
- Valenza, J. K. (2007) Ten reasons why your next pathfinder should be a wiki. *2.0 meets information fluency*. Retrieved from
<http://informationfluency.wikispaces.com/Ten+reasons+why+your+next+pathfinder+should+be+a+wiki>
- Valenza, J. K. (2011, October). In D. Loertscher (Chair). *Digital collection curation*. Paper presented at Treasure mountain research retreat, Minneapolis, MN.
- Wallace H.A. (1944). Democracy reborn, *American Magazine*. (New York, 1944), edited by Russell Lord, p. 208. An article from *American Magazine*, March, 1943. Retrieved from <http://newdeal.feri.org/wallace/haw19.htm>
- Wilkinson, L. (2011). A reasonable objection to transliteracy, *Libraries and transliteracy*. Retrieved from <http://librariesandtransliteracy.wordpress.com/2011/08/05/a-reasonable-objection-to-transliteracy/#more-2048>

Wurster, S. (2011) What is the big 6? <http://www.big6.com/about/>

Bibliography

American Library Association (2006) Presidential Committee on Information Literacy.

<http://www.ala.org/ala/mgrps/divs/acrl/publications/whitepapers/presidential.cfm>

(Accessed November 19, 2011) Document ID: 126315

Anderson, M. A. (2011). Design concepts for the next-gen media center.

Internet@Schools, 18(2), 24-25. Retrieved from EBSCOhost.

Asselin, M., Branch, J.L., & Oberg, D. (2003) *Achieving information literacy*. Ottawa, Canada: Canadian Association for School Libraries.

Byrne, R. (2009). The effect of web 2.0 on teaching and learning. *Teacher Librarian*, 37(2), 50-53. Retrieved from EBSCOhost.

Jenkins, H. (2004). Make meaning, not war. *Independent School*, 63(4), 38-48. Retrieved from EBSCOhost.

Jenkins, H. (2005). Getting into the game. *Educational Leadership*, 62(7), 48-51. Retrieved from EBSCOhost.

Jenkins, H. (2007). From you tube to you niversity. *Chronicle of Higher Education*, 53(24), B9-B10. Retrieved from EBSCOhost.

Kuhlthau, C.C., Maniotes, L.K., & Caspari, A.K. (2007) *Guided inquiry: Learning in the 21st century*. Westport, CN: Libraries Unlimited.

Lance, K. C., Rodney, M. J., & Hamilton-Pennell, C. (2000). Measuring up to standards: The impact of school library programs & information literacy in Pennsylvania schools.

- Leaderhouse, C. (2006). *Collaborative teaching and multiple intelligences: A rational fit*. Canadian Association for School Libraries. Retrieved from EBSCOhost.
- Newman, B., Ipri, T., Molaro, A., Caserotti, G., & Wilkinson, L. (2010-11). *Libraries and transliteracy*. Retrieved from <http://librariesandtransliteracy.wordpress.com/>
- Salisbury, F., & Sheridan, L. (2011). Mapping the journey: Developing an information literacy strategy as part of curriculum reform. *Journal of Librarianship and Information Science*, 43(3), 185-93. doi:10.1177/0961000611411961
- Tilke, R. (2002) *Managing your school library & information service: a practical handbook*. London, England: Facet Publishing.
- Todd, R. J. (1995). Information literacy: Philosophy, principles, and practice. *School Libraries Worldwide*, 1(1), 54-68. Retrieved from Library Lit & Inf Full Text database.
- Wiksell, W. (1941). A procedure for mastering the basic library skills. *The Journal of Educational Research*, 35(1), pp. 36-39. Retrieved from JSTOR.