

Towards a Transformative Pedagogy for School Libraries 2.0

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As more and more educators face the impact of [Web 2.0](#), and as we see emerging what could be called a Learning 2.0 environment, it becomes urgent to extend teaching to meet the literacy and learning needs of the Net Generation. These 'new' learners and their expanding literacy needs have major implications for current models of school library programs which are largely focused on reading promotion and information literacy skills. We join others in recognizing the need to critically question long held tenets of school libraries and to create a new research-based vision that will accord with the current economic and social directions driving educational change. This paper contributes to that process by proposing a framework for the work of school libraries in new times based on research in new literacies, today's learners, and emerging concepts of knowledge.

Today's students are no longer the people our education system was designed to teach. ([Prensky](#), 2001)

Spurred by explosive developments in information and communication technologies generally and Web 2.0 specifically, the meanings of knowledge (Castells, 2000; Gilbert, 2005); and literacy (Lankshear & Knoebel, 2003; Leu, Kinzer, Coiro, & Cammack, 2004; Lonsdale & McCurry, 2004) are changing profoundly. Today's students view digital technologies very differently from their teachers as they seamlessly integrate them into all aspects of their lives (Lenhart, Madden, & Hitlin, 2005; Media Awareness Network, 2005; Organisation for Economic and Co-operation Development, 2001). Outside of school, many young people comfortably use a wide variety of new literacies associated with new technologies and use Web 2.0 tools to construct and distribute knowledge (Knoebel & Lankshear, 2007; Lenhart, Madden, Macgill & Smith, 2007). These new literacy practices are also defining the new workplace in the knowledge economy (Lonsdale & McCurry, 2004). We agree with Selfe and Howisher (2004), and others, that the literacy education provided in the past by parents and teachers will no longer equip people for success in the altered world in which we live. These transformations of the essential foundations of education--learners, literacy, and knowledge--carry dramatic implications for teaching and learning. Below we identify key concepts emerging from three interrelated literatures: today's learners, new literacies, and postmodern views of knowledge.

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New Learners

A growing literature focuses on today's students who were born into this era of burgeoning information and communication technologies. As a group, they are variously termed digital natives, Net Generation, Information Generation, Millennials and Neo Millennials (e.g., Aphek, 2001; Barnes, Marateo & Ferris, 2007; Gee, 2002; Howe & Strauss, 2000; Negroponte, 1995, 2008; Oblinger & Oblinger, 2005; O'Reilly, 2000; Prensky, 2001; Tapscott, 1998). Studies of Internet access and usage by youth in North America, the United Kingdom, and Europe show dramatically escalating trends (Livingstone & Bober, 2005; Media Awareness Network, 2005; Organisation for Economic and Co-operation Development, 2005). Although one level of the digital divide is closing, others are opening. First, a "participation divide" is emerging whereby young people from higher socioeconomic classes are the primary creators of Web content (Hargittai & Walejko, 2008). This same literature points to a seriously widening gap between home usage of the Internet by youth and the paucity of usage opportunities in school settings, particularly opportunities for experiences to engage in the participatory culture of the Internet (Jenkins, Purushotma, Clinton, Weigel, & Robison, 2006; Levin & Arafeh, 2002).

While acknowledging variation within and among countries, the literature on youth and new technologies reveals unique ways this generation learns and distinct traits in their personal identities. They are growing up connected to the world and each other; they use technologies to communicate with known and unknown others and to shape their lives; they are action-oriented problem solvers and see technology as their primary tool; they define their identities by shared interests and experiences; they herald creative thinking, empowerment, and problem solving as key qualities in the new global economies; and they see themselves as competent pioneers in their personal and shared futures. Given the widespread and rapid changes spawned by new technologies and embraced by adolescents, it is especially critical that educators attend to these distinct characteristics of today's youth. As Leu, McVerry, O'Bryne, Zawilinski, Castek, & Hartman (in press) recognize, "adolescents direct change within societies, they are the harbingers of our future. We see this taking place now in the changing social practices of literacy as the Internet enters their lives" (p. 3).

New Literacies

What counted as literacy a generation ago has changed significantly. To function effectively in society now requires more than basic reading and writing with old technologies and print materials. In their workplaces, communities, and personal lives, people must be competent in a variety of print and digital technologies to communicate and learn. Within this expanding notion of literacy, "new literacies" refers to new forms of texts--or post-typographic (digital) forms in which images and multimedia are increasingly dominant--and new ways of using text to shape new ways of thinking such as wikis, weblogs, social networks, mash-ups, zines and scenario planning (Lankshear & Knoebel, 2003). Literacy in online environments such as the Internet involves skills and processes that are both common to print literacy but also skills that are unique such as using search engines, reading websites, selecting appropriate hyperlinks and comparing information across sources (Coiro & Dobler, 2007; Henry, 2006; Leu, et al., 2007; Sutherland-Smith, 2002).

Although today's students are savvy in many aspects of the new literacies of the Internet, research shows they are not as proficient as popularly thought. When presented with an information problem/question, they go first to the Internet, tend to rely exclusively on Google as their search engine, and use natural language as search terms (Rowlands & Nicholas, 2008; Stenton, 2007). This pattern indicates their limited understanding of the Internet as a collection of resources from different providers and lack of knowledge of more effective key word search strategies (Rowlands & Nicholas, 2008). They approach the results list with a "click and grab" strategy by most often selecting the first source on the list with minimal or no review and evaluation of its relevance or quality (Guinee, Eagleton, & Hall, 2003; Henry, 2006). Students spend little time reading the source; instead skimming and scanning are typical reading processes for both youth and college students (Rowlands & Nicholas, 2008). Once within a website, becoming distracted by both internal and external hyperlinks is a greater risk than in print sources of information. Finally, cutting and pasting rather than rewording and recording are dominant processes when students are taking notes from online information sources (Lathrop & Foss, 2000).

New literacies are more than new types of texts and processes imposed on a past world; they are situated in what Castells (2000) calls "the era of informationalism" which is oriented towards technological development, the production and accumulation of knowledge and towards higher levels of complexity in information processing. In this way, new literacies are never fixed or definable but constantly evolving. Finally, new literacies are not limited to technical and intellectual competencies, but include social and ethical responsibilities necessary for living in today's networked world (Kapitzke, 2003). Thus, being able to deeply and critically evaluate information to uncover perspectives both present and absent, as well as techniques used to accomplish these goals is an increasingly central element of the new literacies. And this means more than asking "Is this credible" but rather asking such questions as "What is credible?," "Who decides?" "What does this person have invested in this information?" "How does the author get me to believe him/her?" "How does the information influence my thinking on the subject?" In accordance with New Literacies Studies (New London Group, 1996), the larger purpose of information literacy in this view is transformative, aimed at personal and social action and ultimately viewed as a means to redress social inequities. While current policies for the future of education emphasize critical literacy (e.g., New Media Consortium, 2007), research about young people's Internet literacy reveals an urgent need for instruction in these higher level aspects of new literacies (Asselin & Lam, 2007; Damico & Baildon, 2007; Livingstone & Bober, 2005).

New concepts of knowledge

If education is to prepare students for participation in the era of informationalism and the knowledge-based society, then radical shifts about the postmodern nature of knowledge need to be understood (Castells, 2000; Gilbert, 2005; Lankshear & Knoebel, 2003; Lyotard, 1984). Knowledge in the Industrial Age was viewed as fixed, authoritative, discipline-bound, obtained and owned by individuals, and regarded as "the truth." In contrast, knowledge in a knowledge-based society is constantly changing, contested, interdisciplinary, and collaboratively constructed and re-constructed by "amateurs" for massive audiences. Wikipedia and its many

spinoffs exemplify this new meaning of knowledge. Youth spend large amounts of time on the “new Web” using Web 2.0 applications (Lenhart et al., 2007) which enable very different kinds of engagements and purposes which are more focused on interaction, participation and creation rather than passive reception and retrieval of information. Given the shift of the information environment from finding, locating and evaluating information to one of using information, creating knowledge and sharing ideas (Todd, 2008), it is disturbing that there is little evidence of any of these activities for school learning even though many teachers report they are using the Internet in school assignments (National School Boards Association, 2007). Indeed, research tasks in schools are predominantly framed as fact-gathering activities rather than meaningful inquiry (Asselin & Moayeri, 2008; Asselin & Lam, 2007; Limburg, 1999). In contrast to the more typical use of the Internet in school assignments as a virtual reference library, its potential to be regarded as the postmodern construct that it is remains untapped—as something that decolonizes knowledge and the creation and ownership of it and as a potentially more democratic knowledge community. Participation in a knowledge-based society is determined by extensive experience with and expertise in using new literacies for these purposes and young people will be advantaged or disadvantaged accordingly. Put simply, ensuring competencies in new literacies for learning for all students is a means of addressing the new kind of digital divide (Castek, Leu, Coiro, Gort, Henry, & Lima, 2007; Livingstone & Bober, 2005).

Methodology

Three questions guided the development of a proposed pedagogical framework for school library programs in a Learning 2.0 environment: (1) Who are the new learners of the Net Generation?; (2) What literacies do today’s students need to live and work in the world?; (3) How do we teach the new learners? Three stages of data collection and analyses were used to answer these questions. First, extensive reviews of current literature in each of the three areas above were carried out and key concepts identified. This body of research was drawn from national and international contexts and limited to research from 2000-2008 except for several seminal pieces included from pre-2000. Second, videotaped interviews with 14 teenage students, balanced for gender, background and school achievement, in two parts of Canada and in Switzerland were conducted to extend and enrich findings from the literature review. Students spoke in small focus groups and individually about how they use technology in their everyday lives, how they use the Internet for school work, what they need to learn to be better users of technology, and their suggestions to teachers about using the Internet to make school more engaging and relevant. Third, key concepts about the new learners, the literacies they need, and how to teach these literacies that were gained from the review of the literature and the interviews, were field-tested through a series of workshops and presentations to local, national and international colleagues. These sessions included keynote addresses at the International Reading Association Convention (Asselin, 2004; Asselin & Doiron, 2004), the Council of Ministers of Education in Canada Forum (Asselin & Doiron, 2005), and public addresses to the library communities in Aarau and Zurich, Switzerland (Doiron & Asselin, 2007). Workshop sessions were held at the International Association for School Librarianship Conference in Lisbon (Asselin & Doiron, 2006), three cities in Switzerland (Asselin & Doiron, 2007a; Asselin & Doiron, 2007b); several provincial library organizations across Canada (Asselin

& McPherson, 2007; Doiron, 2005, 2006) and at local venues in each of our home provinces. Graduate students in two Masters level courses in two school librarianship programs in Canada ([iBrary](#), 2007) also explored the issues raised by these three questions, as did pre-service teachers in two institutions in Canada and one in Zurich (Asselin & Doiron, 2007b). All formal and informal feedback and suggestions were synthesized and incorporated into the overall framework. We recognize the outcomes from our investigation as only a first step rather than a definitive plan from which to generate a new vision for school libraries.

Who are the Learners of the Net Generation?

It is fundamental to begin the development of a new pedagogy for school libraries by first examining the literature on the learners arriving in our schools and current demographic information on today's youth, and reflecting on the realities faced by educators in schools today. Many writers reviewed above have attempted to describe the generational characteristics of people born since the 1980s. As the first generation to have grown up always having the Internet, new media, and access to many learning opportunities, educators are faced with growing evidence that the traditional methods of teaching and learning are out of sync with current students and find many are disengaged with their school work and more interested in what is happening outside of school. We have attempted to explore and analyze what many have said about these "new learners" and have created 10 major characteristics common across the literature on this Net Generation

Interactive participants

The youth of the Information Generation are not passive observers of the world. They are interactive participants who accept change and innovation as part of their daily life. They are goal-oriented and active decision-makers who were brought up with input into their choices and options. Their parents included them in deciding on their clothing, their menu choices, their vacation plans and a host of everyday activities.

Take action approach

This is a generation of problem-solvers who take a "make your point" approach to getting things done. They want to tackle solutions, not spend time analyzing the problem. They are upfront about what needs to be done and they prefer a take-action approach rather than waiting for conditions to be perfect. Rather than ready, aim, fire, they prefer to fire first and see what happens.

Early adopters

The youth of the Net Generation are early and eager adopters of new technologies. They don't wait for someone to show them how it's done—they assume ownership and control. They don't want to know *how* it works but how to make it work for me. They don't use the instruction manual that comes with a new technology; they seem to have developed a set of skills that transfers seamlessly to new technologies.

Personal landscape creators

The computer, hand-held devices and the Internet are tools they use to create and manage their personal landscapes, a type of playground for them—the land of endless

possibilities and opportunities. Because of their access to digital media, these children learn, work, shop and create in ways different from their parents and teachers.

Multi-tasking, multi-modal, multi-resourcing

The Net Generation's natural learning mode is that of multi-tasking (for example, accessing websites, listening to music, responding on MSN), multi-modal (listening, watching, reading at the same time), and multi-resourcing (using a wide variety of traditional/digital resources). They can handle several tasks at the same time and rely on media-rich resources for their learning.

Learn by doing

The youth of the Net Generation take a hands-on, learn by doing approach to learning. They like to tackle problems and develop their own solutions. They can take responsibility for their learning, show initiative and freely share and give their knowledge to others. They possess intellectual openness rather than individual ownership and find it difficult to understand how people can own and control intellectual property. Negroponte (1995) talks about new forms of learning such as "playing with information" and "learning through research."

An economic force

The youth of the Information Generation are seen as an economic force in society. They have more disposable income than any other generation ever had and they have high expectations for achieving and acquiring the things they need to be successful. Their technology savvy abilities are prompting them to move into the technology workplace earlier. As online shoppers, they are avid users of many commercial sites and services.

Connectivity and community

Being connected with their friends, building and maintaining relationships and being part of a community are very important to the Net Generation. They see the Internet as a way to connect to the world and each other. They are online all the time and they use cell phones, chat tools, blogs, social networks and text messaging as ways to stay connected within their peer group and beyond into virtual communities tied together by common interests or needs. They put themselves online to the world with personal Web pages, personal profiles, entrepreneurial endeavours, podcasts, videocasts and Internet publishing of various kinds.

Passionately tolerant

The youth of the Net Generation are passionately tolerant of various lifestyles and life choices. They are growing up in a variety of family structures (single parent, multiple parents, same sex parents, extended families); they have a much stronger global orientation in all of their activities as they connect with friends (and shop) around the world; and they seek greater social inclusion of varied and diverse cultural values. The Net Generation grew up with diversity presented to them in all their television, learning materials, children's literature and their local and global media. Their backyards are the world, not just the local neighbourhood.

A force for social transformation

The Net Generation holds the potential for great social transformation through their engagement and leadership in a wealth of current and global issues (for instance, the

environmental movement). They are a generation who look for new ways to take part socially and politically in society (witness the role YouTube is playing in the current American Presidential campaign). Tapscott (1998) says “these millions of children are combining demographic muscle and digital mastery to become a force for social transformation.”

A Further Synthesis of the Ten Characteristics of New Learners

Our further synthesis of these 10 characteristics collapsed them into two major categories (see Table 1).

Table 1
Describing 2.0 Learners

| Learning Processes | Constructed Identity |
|-------------------------------|---------------------------------|
| Interactive participants | Economic force |
| Take action approach | Networked communities |
| Early adopters | Passionately tolerant |
| Makers of personal landscapes | Force for social transformation |
| Learn by doing | |
| Multi-tasking, multi-modal | |

One category captures how new learners go about a task, how they use technology and their learning style. These *ways they learn* (learning processes) form the interface they use to connect and build their world. They learn by doing, making, and pulling disparate pieces together to create new products; they value action and use a take-action approach. New learners approach their learning as the building of a personal landscape, controlled and mediated through the tools offered by new technologies. They expect information and ideas to be shared openly and freely and created in multi-modal ways. They navigate and browse searching for ideas and information and they can move among various texts in a type of digital grazing.

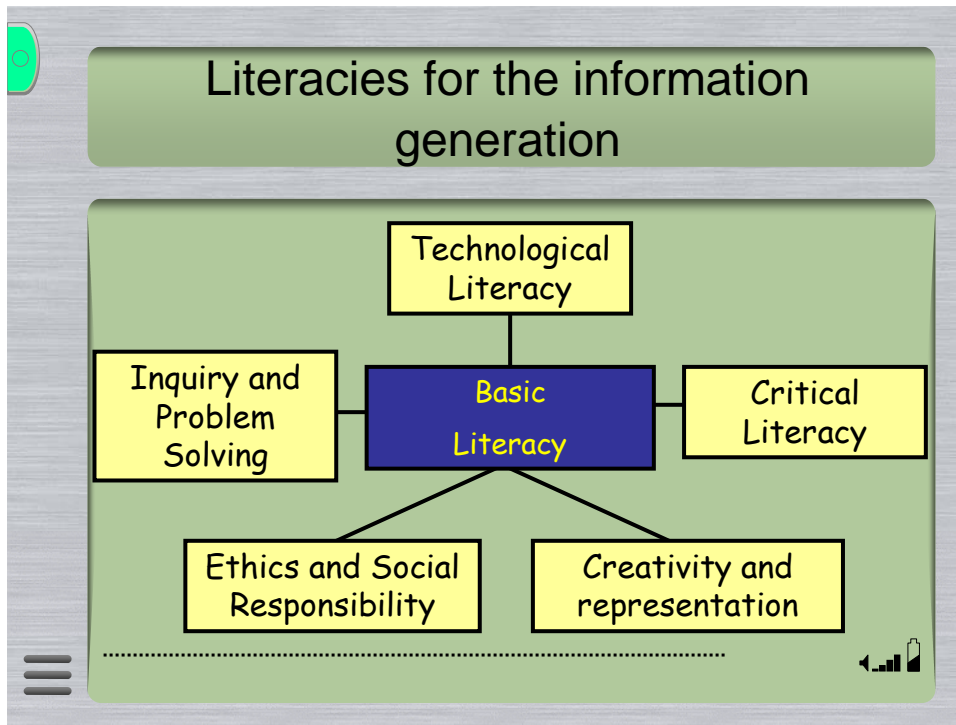
The second category reflects some of the features of their personalities, their values and how they see themselves—*their identity*. These new learners value choice and they understand and exercise their economic power. They value relationships and their independence, yet see things as connected and interdependent; they want to do something significant, make a difference and be part of a connected community; they value diversity, are tolerant and see themselves as active creators of the world.

What are the Literacies these New Learners Need to Live and Work in the World?

This part of the framework identifies the literacies that young people need to successfully participate in their future social, cultural and economic worlds (see Figure 1). Obviously all learning will emerge through the basic literacy skills associated with traditional reading, writing, listening, speaking, viewing and representing, but added to that are five comprehensive areas which reflect the multi-modal, multiple literacies that will enable full literacy development for today’s learners. Following Figure 1, we share some of the key outcomes associated with each constellation of skills. While not exhaustive, the literacies we

identify give some perspective on what learners need to learn to participate in the global, networked society.

Figure 1: Literacies for the Information Generation



Technological Literacy

Technological literacy includes: (1) A complex/comprehensive set of effective and efficient search skills, computer software/hardware and a full range of Web 2.0 social software applications; (2) Navigating, browsing and “reading the landscape” of Internet sites; (3) Word processing skills fully integrated into the writing process; (4) Communication skills using e-mail, text messaging, blogs, and on-line social networks; and (5) Integrating other media formats such as slide shows, mash-ups, wikis, video clips, sound bites and emerging digital formats into their writing and publishing activities.

Inquiry and Problem Solving

An inquiry and problem solving approach to literacy means: (1) Knowing when I have an information need, question or a problem that requires new information; (2) Using essential and meaningful Questions to guide inquiries and not perpetuating a Trivial Pursuit to guide the learning process; (3) Finding, accessing and using information to solve problems, make decisions and create new knowledge; (4) Skills with how information is organized and structured; and (5) Synthesizing new knowledge and creating and sharing that knowledge.

Critical Literacy

Students need to develop critical literacy by learning how to: (1) Focus on how and in whose interest knowledge is produced and presented; (2) Determine authenticity and reliability of sources; (3) Learn how media manipulates and is manipulated; (4) Assess which tools are

best for each learning need; (5) Recognize their global and social responsibilities; and (6) Take their place as active citizens in a democratic society.

Ethics and Social Responsibility

Another major skill area is ethical and responsible use of knowledge. Students need to: (1) Learn to be conscientious users and producers of knowledge; (2) Develop values associated with the fair and honest use of information and distributed and socially constructed knowledge; (3) Develop respect for open source and open knowledge principles which allow for equitable distribution and access to knowledge for all; (4) Represent the knowledge of others accurately and appropriately; and (5) Respect confidentiality, intellectual property and illegal uses of knowledge and information.

Creativity and Representation

Educators need to provide opportunities for students to use their multiple literacy skills creatively and to represent their learning. This includes: (1) Creative ways of preparing and sharing newly developed knowledge; (2) Learners combine presentation methods for more holistic and multimedia approaches; (3) Understanding that the medium becomes the message; (4) Balance: speaking, viewing, performing, artistic, representing, listening, as well as reading and writing modes; and (5) Use slide shows, multimedia tools, website design, Web 2.0 tools, CD and DVD productions, and new digital technologies as they emerge in the future.

In considering the literacies that today's students need, we have drawn particularly from Leu et al. (2004) for their theory of new literacies of the Internet and other digital learning technologies; Damico, Baildon and Campano (2005) for their interdisciplinary framework of technology, literacy and disciplinary knowledge; and from the National Council of Teachers of English (2008) for their statement on literacy in the 21st century.

Leu et al. (2004) argue that for schools to contribute to the development of lifelong learners, a learning society, and a knowledge-based economy, "it becomes essential to prepare students for the literacies [of the Internet and information and communication technologies] because they are central to the use of information and acquisition of knowledge" (p. 1571). These researchers explain that competency in the new literacies of the Internet is critical to being able to participate in global, networked societies because "new literacies allow us to use the Internet and other (digital technologies) to identify important questions, locate information, critically evaluate the usefulness of that information, synthesize information to answer those questions, and then communicate the answers to others" (p. 1572).

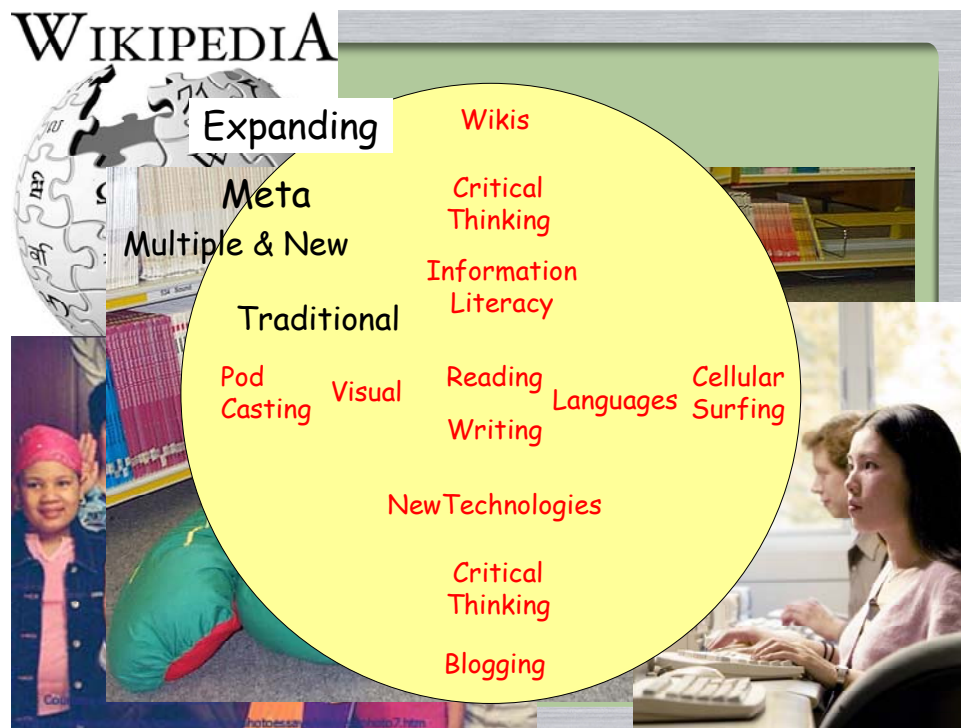
In contrast to well known information literacy pedagogical tools (Eisenberg & Berkowitz, 1990; Shrock, 2008), the interdisciplinary framework developed by Damico, Baildon, and Campano (2005) integrates literacy, disciplinary knowledge and technology. The model consists of three dimensions: operational (navigating websites, judging usefulness etc.), academic (using discipline-specific ways of thinking), and critical (understanding techniques used to influence readers and how one's own perspectives shape interpretation). It is noteworthy that Damico and Baildon (2007) found little evidence of the critical dimension in grade 8 students.

Recognizing the dramatic influence of new technologies on literacy, the National Council of Teachers of English (2008) recently published a position statement capturing the changing aspects of literacy. We situate our expanding view of literacy within this vision.

Literacy in a technology-dependent world involves not only decoding and comprehension but developing proficiency with the tools of technology, building relationships with others to pose and solve problems collaboratively and cross-culturally, designing and sharing information for global communities to meet a variety of purposes; managing, analyzing and synthesizing multiple streams of simultaneous information; creating, critiquing, analyzing, and evaluating multi-media texts; and attending to the ethical responsibilities required by these complex environments (n.p.).

Although information literacy figures prominently in descriptions of 21st century education, other “new” literacies are integral to new school library programs as well, thus creating a “literacy of fusion” where school interests are blended with the students’ interests and out-of-school literacies (Millard, 2006). As shown in Figure 2, our model situates these new literacies within an ecological view of literacy expanding from one literacy to include multiple, new literacies and as yet undetermined literacies.

Figure 2 *Expanding View of Literacy*



How Do We Teach the New Learners??

Our conclusions present a blueprint for educational change that is rooted in a set of transformative pedagogical principles that reflect a revised school library program (outlined in Table 2).

Table 2
Principles for Teaching for the Knowledge-based Society

| How to Teach | What to Teach |
|---|---|
| Collaborative, connected learning | Lifelong learning |
| Control within parameters | Ethical issues |
| User-centered technology | Social responsibility |
| Multiple, diverse resources | Critical consumers and producers of knowledge |
| Contexts of social responsibility and globalization | Develop diverse and flexible competencies |

These principles can be categorized as (1) “what we teach” (the areas of knowledge, skill and attitude we must teach for our children and youth to become successful learners); and (2) “how we teach” (the approaches that capitalize on the learning styles and learning values of new learners). While several of the principles may seem similar to traditional pedagogies developed for school library programs, they can no longer be seen as the “added-value” of having an effective school library, but as pervasive and ubiquitous to how we conceptualize and operate an effective “new” school library. We must use these principles to help us move away from the limiting metaphors of the past where we saw the school library as the “hub” or “heart” of a school; it is better thought of as the “brain” and the “nerve centre” of the school where learners gather in a “learning commons” built around inquiry, creativity and interconnected/interdependent communities. We must recognize and embrace notions such as open access to journals and open knowledge as we develop the research process with students (Kopak, 2008) and realize that learners will bypass us completely unless we become knowledgeable about new resources and new ways of building and disseminating knowledge. Even professional development and learning for teacher librarians needs to embrace new ways of building and sharing knowledge such as movies ([Moayeri, 2008](#)) and immersive environments in Second Life (Kemp & Haycock, 2008). At the very least, we propose that these principles and the framework be used as a means of re-assessing and revising the school library and hopefully to spark an international conversation on new school libraries (Asselin & Doiron, 2008).

Focus on teaching learners ‘how to learn’

More than ever, we must be focusing on developing in learners strong knowledge-building skills and equip them with diverse and flexible competencies which they will need to live and learn throughout their lives. Naslund & Giustini (2008) provide excellent examples of how to use blogging, social networking and other Web 2.0 tools to engage learners in learning how to learn in digital contexts.

Build collaborative, connected learning situations

We must create learning opportunities where learners work locally and globally with other learners to build new knowledge and access current and past knowledge. For example, we work together and build a class wiki on Animals of North America where we all contribute, link to authorities on the topic, interview virtually animal experts and pull together the existing

knowledge on our topic using available online multi-media products while creating our own. At the post-secondary level, Kemp and Haycock (2008) provide an excellent example of how these immersive environments can involve high-end technologies to create multi-user virtual worlds that can both replicate and far extend physical classrooms.

Capitalize on new learners' social conscience and global perspective

Herein lies a great potential for engaging learners in making a difference in the world. We only have to look at the impact YouTube and other digital tools are having on issues such as the current American Presidential race to learn that today's youth are using new technologies to make a statement, lobby for change and wake people up to what is happening around them. We need to move away from the static social studies project where each student picked a country and "researched" it and give our learners meaningful tasks built around their global consciousness.

Assign learners more control in their learning within a clear set of parameters

As educators, we find this particularly difficult. We tend to want learning to look the same yielding a common product at the end (a written essay on our favourite political leader for example). We would be better to set clear parameters for a task and let learners choose the ways and means to create personally meaningful products that will still include what we expected for the assignment. For example that essay could be prepared digitally with links to political leaders' policy statements, personal websites and video clips of recent speeches. Friese (2008) urges us to expand our programs to make room for the inclusion of popular culture materials in school library projects offering students more choice and input into the learning context.

Use multiple and varied resources in teaching and learning contexts

If new learners are multi-modal in their learning styles, then they will gravitate to the resources that are first of all, most easily accessible, and that have the richest multimedia formats. Viewing images and reading texts are balanced as the key literacy processes used to study information and create new and varied texts. In school libraries, we support learning through a range of new types of texts and modes of learning (Sanford, 2008). Doiron & Asselin (2005) provide examples of using a wide range of resources to build literacy and develop inquiry.

Teach learners the ethical issues associated with information use and knowledge building

Critical literacy should be the pervasive theme which runs through all our work in the school library. We must use the medium itself to teach learners to critique that very medium – to use the Internet as the postmodern construct that it can be. Good examples are found in McPherson (2008) with activities (a) investigating junk mail; (b) reading media photographs; and (c) deconstructing YouTube.

Teach learners to respect the work of others and to act responsibly as information literate citizens.

The Internet and the Web 2.0 environment seem like a free range where everything is there for the taking. Learners must come to understand at an early age that they have responsibilities as they take from and contribute to the expanding Internet. What are intellectual property rights? What does open source mean? What should I be telling about myself? An

information literate, global citizen must live and work in this world with respect and responsibility.

Conclusions and Educational Significance

Teaching and curriculum have always been socialization processes and therefore political activities. The difference now is that globalization and what Castells (2000) calls the “rise of the networked society”, propelled by accelerating developments in technology, have pushed the politics of education to the fore (Kalantzis, Varnava-Skourea, & Cope, 2002). This moves us from a notion of covering the curriculum to the challenges of developing a transformative approach where students *uncover* the curriculum. Some educators carry on, ill-informed about new learners, new literacies, and new concepts of knowledge. They limit their vision of a school library and ignore the leadership role it can play in a transformative pedagogy (Leander, 2007). Others unknowingly layer the new onto deeply embedded educational structures and practices thus appearing to be innovative while perpetuating old ways of learning and teaching. Equipping schools with new technologies does not mean that the potential and implications of Learning 2.0 are realized. Neither does assigning projects in which Internet use is limited to that of a virtual reference library. While today’s youth and society race ahead, learning in school (and unfortunately too often learning in the school library) is becoming less and less what James Gee (2002) calls *efficacious*: what a child does now as a learner must be connected in meaningful and motivated ways with mature (insider) versions of related practices. If school libraries fail to respond to the evidence that learners and learning have dramatically changed, we run the risk of being completely ignored by our children and youth, written-off as a throw back to previous times. We know the new literacies are active in students’ out-of-school lives, and we know the critical place of new literacies in the workplace. It is time to situate the new literacies of the real world in schools and make school libraries the bridge between in-school and out-of-school literacies.

It is enormously encouraging and exciting that the broader library community is leading the way in responding to the changes propelled by Web 2.0 and expressing the road to change with innovative media ([Classroom 2.0](#), [iBrary](#), [School Library Learning 2.0](#), and [Library 2.0](#)). In this special issue of [School Libraries Worldwide](#), [A Librarian’s 2.0 Manifesto](#) (Cohen, 2007) and [The School Library is a Mash up Beta](#) (Doyle & Trousdell, 2008) identify actions necessary for libraries to advance these activities – studying today’s learners in order to develop meaningful user-centered services and programs; engaging in a collaborative change process as a profession; embracing the need for immediate actions; taking risks; and accepting that learning will happen as you go. Although these behaviours support change in all types of libraries, a conceptual framework provides the map for change and the means of monitoring new directions for school libraries. Implicit within this framework are questions and issues about knowledge property, information ethics, and learning ecologies which are particularly pressing for school libraries. Our proposed framework is intended to begin to enable a more thoughtful and effectual response to new learners, new literacies, and new concepts of knowledge so that school libraries become an integral part of New Times (Luke & Elkins, 1998).

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