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Teacher-Librarians and the New Learning Divide

Part One: Bridging the Learning Divide

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Part Two: Teacher-Librarians Learning to Learn

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Part One: Bridging the Learning Divide

The digital divide of 2009 is no longer about access to computers and networks. It's about the disconnect between the way students interact with technology in their own lives, and the far more restricted use that they experience at school. Concern about this divide is growing in education, but the challenges are far more daunting than bridging the first digital divide ever was. It turns out that buying computers and hooking them up to networks was not the magic bullet that many hoped it might be. The digital divide of a decade ago has morphed into a far more complex learning divide in our schools.

While computers have become more widely available in schools, concerns persist about how they are being used. Statistics Canada's *Information and Communications Technologies in Schools Survey* (ICTSS) of 2004 reported that teachers were twice as likely to incorporate word processing into instruction than any other type of application, including accessing the Internet. Software to support creative works was used minimally. Yet in 2005, the Media Awareness Network was reporting that ninety-four percent of kids had access to the Internet at home, with a significant majority having high-speed connections. Kids were connected and online, using computers and increasingly using mobile devices. They were engaged in technology for entertainment, communication, and creating multimedia content. Kids' online world was becoming a seamless extension of their offline world. Everywhere, that is, except at school.

We have built the physical infrastructure for technology in our schools, but we are not maximizing its potential for engaging students in learning. While there are many innovative educators harnessing the potential of networked, social, online learning, computer use in schools is largely very restricted. Moving beyond the new digital divide presents daunting challenges.

Technology on the Fringes of Curriculum

The first challenge is the most significant. The effective use of information and communications technologies (ICT) remains largely on the fringes of curriculum expectations and the instructional focus of Canada's school systems. The use of technology in instruction is considered optional except in some specialized subjects, and consequently it is not broadly or effectively used. The Ontario Public School Boards' Association addressed this in its discussion paper, *What if: Technology in the 21st century classroom* (2009). The paper calls for, "a vision of program revitalization, technology embedded in curriculum methodology and expectations, a wireless learning environment that moves us from desktop to mobile devices, leveraging what is already available in the world of information and communications technology where lateral learning thrives and social networking is a force for democratic change."

Teaching the Teacher

Principals responding to the ICTSS survey commented that teachers in their schools were far more competent in computer tasks required of them for administrative

purposes like reporting, than they were in the instructional use of technology. Teachers' personal confidence and competence with technology and ICT curriculum integration are significant factors determining how much or how little access students have at school (Bingimlas, 2009). In combination with lack of time, effective training, technical support and the accessibility of resources, these factors deter many teachers from integrating ICT into their instructional programs.

The Fear Factor

Technology is a pervasive part of modern life, yet society tends to be very cautious about its use when it comes to children and schools. Read an article about cell phones or iPods in schools, and it will almost certainly be about their disruptive influence – cheating, bullying, distracting, rather than on the powerful options for learning that mobile devices offer. When progress in technology butts its head against concern for children, lack of knowledge sometimes translates into uncertainty and fear. Attention tends to focus on warning of the dangers rather than modeling the learning potential.

Security and Content Filtering

School boards have huge challenges in maintaining complex technology infrastructures and keeping networks secure and reliable. Content filtering software is used by the vast majority of school districts to block truly malicious content, as well as content perceived to be dangerous to young students. Student safety is the most frequently used explanation for the widespread practice of blocking access to social networking sites and resources such as YouTube. There is growing understanding, however, that trying to keep students in a protected bubble may ultimately be ineffective. "Safety policies remain important, as does teaching students about online safety and responsible online expression – but students may learn these lessons better while they're actually using social networking tools." (National School Boards Association, 2007).

The School Library

The ICTSS survey of 2004 revealed some encouraging statistics about the role of school library programs. According to David Coish of Statistics Canada, as the number of teacher-librarians dedicated to a school increased, so too did the likelihood that computer applications were incorporated into teaching practices. The absolute amount of funding for the library was also strongly associated with the use of computer technology in teaching practices. Coish does caution, however, that the level of teacher-librarian staffing itself may reflect the overall higher funding of the school, and therefore its ability to provide technology resources. "Also, the degree to which teacher-librarians have a role in incorporating technology into teaching practices will vary with the responsibilities of each librarian, their skill level and the availability of other technical support in the school." (Coish, 2005).

Libraries Taking the Lead

Despite Coish's cautions, bridging the new digital divide should be seen as one of the prime goals of school librarians in Canada. From the increase in electronic resources in

our collections to the inquiry-based and collaborative approach of the teaching program, the library can support teachers and students as they explore the huge learning potential of technology. New thinking about the library as a learning commons (Loertscher, Koechlin & Zwaan, 2008) places the library as a “client-side” learning space, where the teacher-librarian, technology teacher, other professionals and support staff work to bridge the “digital chasm” between the technology habits of students and the traditional nature of schooling.

If we are to take this leadership role, it is incumbent on all school library professionals to break their own professional learning barriers as they relate to technology. We need to kick our own networked professional learning up several notches if we are to help lead the way across the digital learning divide.

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Part Two: Teacher-Librarians Learning to Learn

Bridging the new digital divide should be seen as one of the primary goals of teacher-librarians in Canada. Such was the conclusion drawn in the first part of this paper, published in *Feliciter* (2009) under the title, "Bridging the Learning Divide". This follow-up explores what that implies and what it will take to get there.

There is no doubt that the notion of 21st century learning, the buzz phrase that encapsulates a myriad of concepts but tends to focus on the burgeoning importance of digital literacies, has captured the collective imaginations of many educators. After years of discussion in the professional literature and lively online conversations in the education and library blogospheres, the implications of shifting technology seems to be getting the attention of education policy-makers. Publication of the paper, *What if?: Technology in the 21st century classroom* by the Ontario Public School Boards' Association in 2009 has brought the discussion into the mainstream of educational discussion in the province.

We are finally getting to a place where educators cannot ignore the world around them anymore. It is becoming more and more apparent that shutting the doors of the school and pretending that the rest of the world is not reading, exploring, communicating, socializing and creating online is not a viable long-term strategy. "Teachers need not fear that they will be made obsolete. They will, however, feel increasing pressure to bring their methods – along with the curriculum – into line with the way the modern world works." (Wallis C. & Steptoe, S., 2006).

School library professionals have a greater responsibility than other teachers to bridge our own learning divide when it comes to technology for some very basic reasons. Information is our "subject". For this reason alone, we have a professional responsibility to be informed and knowledgeable about the great shifts that are taking place in the technology and context of information today. The inquiry process is at the heart of what we teach. It is our responsibility to explore opportunities to enhance learning experiences and to engage students with the powerful use of media and online social media.

Teacher-Librarians as Information Specialists

At the most basic level, we need to understand our own resources, which are increasingly going online. In Ontario all of our school libraries now have access to a suite of online encyclopedias licensed by the Ministry of Education and a wide selection of online research databases licensed for us by Knowledge Ontario. Yet there are still many amongst us, unfortunately, who see these as collections apart, and not an integral and essential part of our libraries. We do a disservice to our clientele by not actively promoting these resources, being thoughtful about how we facilitate access, and explicitly teaching how to use them effectively. "Teachers and librarians must ensure that these valuable materials get used and are no further than a click or two away from learners. Students who do not have access to this substantial content, students who choose not to use them, are part of what I consider an information underclass."

(Valenza, 2007).

At a higher level, we need to know our own subject: billing ourselves as information specialists has no meaning if we are not exploring and seeking to understand how technology is dramatically shifting our information environment. We should be embarrassed by colleagues stuck in old-school defensiveness and snobbery about Google. Instead we need to be Google gurus, teaching not only when it's not the best research starting point, but also when it is.

But let's not leave it at Google. Being an information specialist in 2010 means seeking to understand how social media is shifting our notions of authority. Wikipedia truly does get better the more it is used. Understanding when it's useful and when it's not is our responsibility as information specialists. Trying to assess the quality of a Wikipedia article by traditional benchmarks or using our standard website evaluation rubrics is meaningless. It is our responsibility to explore and deeply understand the resources to which our clientele naturally gravitate, and to help them to use these appropriately and knowledgeably.

Today's information specialists are intensely curious about our new information culture – phenomena like the “long tail” of information that exists on the web outside of traditional publishing structures. Where once this type of information would have been virtually unfindable, today's world of user tagging and RSS means that it can spread “virally”. Today's information specialists seek to understand, use and appreciate the “folksonomies” of user-generated tagging. They are interested in how new developments in search interfaces are improving our own library systems, and how the integration of a social layer on top of their controlled vocabularies and taxonomies improves the user experience and empowers learning.

Today's information specialists explore all of these changes and help others to navigate and think critically about this new and ever-shifting landscape. This is our “subject” as teacher-librarians, and just as we expect science teachers to keep their subject-specific knowledge current, so should our clientele expect us to keep abreast of our shifting information culture and keep up our own expertise.

Understanding Our Students' Abilities as Well as Their Needs

And what of our knowledge of how our students truly experience information, and of their real information-seeking behaviors? Today's teens are immersing themselves in the interactivity and social nature of the new web, and this is shifting the ways that they seek, synthesize and use information. More and more, information is being seen not as content to be passively consumed, but as a commodity to be creatively transformed.

Early research into teen information-seeking looked at search behaviors in isolation. This approach, viewed from the perspective of time, was misleading and gave a false and negative view of teens. More recent research recognizes that one cannot understand the information behaviors of a young person without considering cognitive, social and emotional development. The research is also starting to broaden the understanding of youth information-seeking to contexts outside of school and outside of

the familiar information systems provided by libraries. It is clear that much remains to be studied and to be understood. It has also become clear that this research is vital to information scientists seeking to make systems more relevant, librarians seeking to serve clients more powerfully, and educators seeking to keep learning relevant to the context of twenty-first century students' lives.

Although these recent trends in research are encouraging, Dresang (2005) observes that while the existing research on youth information-seeking is helpful in defining some overall trends, it tends to focus on the deficiencies of the information-seeker rather than "ferreting out the potential of new and exciting ways of knowing in a digital age". He concludes that new information that is coming to light about the collaborative behaviors of youth as they explore information may alter the interpretation of previous research. Dresang also suggests that new digital age principles of interactivity, connectivity, and access could bring new and perhaps more positive perspectives on teen information-seeking to researchers and professionals.

The reality is that teens are more engaged in information now than they have ever been before, because the information world has, to a large extent, adopted the social construct of collaboration that is most natural to them. David Warlick states that, "part of the value of the content is what they can do with it: they build new information products in imaginative ways" (Warlick, 2008).

The implications for libraries and for education are profound in this new reality. Loertscher (2008) suggests that teacher-librarians should themselves be sophisticated users of digital information and Web 2.0 technologies, while still concentrating their teaching on discerning quality information and expertise in the digital space. He suggests that access to digital resources should be based on how students search. Valenza (2006) makes a compelling case for the need to improve information systems – to make them engaging to young users with "context-sensitive support and instruction as well as compensations for vocabulary, spelling, and knowledge gaps."

New Learning, New Literacies

All of this hints at the third area that we have a responsibility to understand, namely multi-media. Where once written text was our predominant means of communication, our new information world is dominated by images and sound. The means to create, transform and share digital media is pervasive and accessible. Clearly this has implications for addressing multiple literacies as we help students read and interpret information. The new Ontario guideline document, *Together for learning: School libraries and the emergence of the learning commons* (2010), recognizes this reality.

Many students are already collaborative writers and content creators in the digital world. This world provides learners with unprecedented and powerful opportunities to develop multiple literacies. In doing so, learners can develop deeper understanding of the global community. Making writing more meaningful and relevant to today's students means engaging them in this interactive online environment.

In today's context, being effective multi-media and digital writers is arguably as important as being competent in more traditional media. Our responsibility then as teachers is to be multi-media literate ourselves, both as readers and as writers.

Clearly all of this is a challenge. It is a challenge that we must take up if we are to remain relevant. It is our responsibility as information professionals to know our subject, and our responsibility as teachers to engage students in learning. "We are at the crossroads of an unprecedented opportunity. Demands for school improvement, the call for 21st Century skills construction, the growth of Professional Learning Communities, and the potential of emerging technologies and Web 2.0 tools to re-engage the passion of teachers and interest of learners cannot be denied." (Koechlin, 2010).

Barriers to Professional Learning

Our educational institutions are struggling to meet the challenges of using technology powerfully for learning. There is no doubt that there are many barriers, discussed in the first part of this paper. Perhaps some of the barriers exist within ourselves, and with our own acceptance that we must learn how to learn in new ways. It takes a bit of courage and humility to accept our own needs, and give ourselves permission to be naïve and curious learners, rather than falling back on the myths and excuses that really fall within the realm of urban legend.

Take for example the myth of the digital native and digital immigrant. Yes, the students that we teach have never known a world without computers, and yes, there is no doubt that they collectively seem to have a greater comfort with that environment. But many of us "digital immigrants" speak tech with a pretty good digital accent! Claiming to be a digital immigrant has become one of the biggest excuses for not learning about technology and not moving teaching practice forward into the new century.

Perhaps the divide is in fact a learning divide, not a generational divide. "Someone who tends toward being naturally digital isn't there because of their age or experience with technology. Rather an innate curiosity and ability to learn and adapt enabled that person to embrace new technologies in a seemingly natural way. Many of our students seem to be so-called digital natives simply because they haven't forgotten how to explore and learn." (Harris, 2010).

Overemphasis on generational divides has led to some misleading perceptions of the digital and media literacy of our students. Hobbs and Jensen (2009) observe, "Sadly, neither creation nor sharing is randomly distributed among a diverse group of young adults, since creative activity is related to similar factors as it was in previous times: a person's socioeconomic status." They go on to cite and discuss statistical and research evidence suggesting that in the United States the digital divide may have decreased in terms of exposure to the online environment, but is still firmly entrenched along economic grounds when it comes to content creation.

This presents a compelling challenge for school library programs and teacher-librarians. We are about equity of access and opportunity: it seems that our role in bridging the digital divide is as important now as it has ever been.

Teacher-librarians have a unique opportunity to ground the exploration of new literacies and new tools firmly in the context of true learning. The literature on 21st century learning is replete with platitudes about new contexts for learning. “Minds are not containers, filing cabinets, or databases – places to store knowledge just in case – but resources that can be connected to other resources for the purpose of generating new knowledge.” (Gilbert, 2007). There is a tremendous amount of truth in the platitude to be sure, but there is also a tendency to dismiss content knowledge as irrelevant as we explore new ways of learning. We must not forget that exploration and critical thinking are ultimately part of knowledge building. Our students, like us, need to learn their subjects deeply. New ways of knowing are critical, but so too is what we know.

Rotherham and Willingham (2009) warn that not understanding the enduring importance of content as we explore new processes will doom 21st century educational reform efforts to failure. “Such notions contradict what we know about teaching and learning and raise concerns that the 21st century skills movement will end up being a weak intervention for the very students – low-income students and students of color – who most need powerful schools as a matter of social equity.”

Learning to Learn: Nature and Nurture

Teacher-librarians, I would argue, have more capacity than most for learning to learn in our rapidly changing technology context. Surely it is in our nature to be inquisitive, since we have chosen to specialize in the inquiry process itself. We also understand differentiation better than most. We do after all have the largest differentiated classroom in the school, with a broad range of resources to meet a broad range of learning needs.

Harris (2010) makes a great case for helping us to understand our own needs as digital learners, arguing that for some of us it comes more naturally, while others may need a bit more nurture. “Professional development, as well as library and classroom instruction in technology, can be modified to match students’ needs. For some learners, a brief bit of nurturing focusing on the benefits and importance of learning a new technology may be enough to nudge them into a more naturally digital approach... In other cases, a typically natural digital learner may need help in adopting a new mindset required for an emerging technology.”

Explore, Exploit, Engage

Opportunities for this level of differentiation, to meet the variations in our own learning styles, has never been greater. The very technology that we seek to learn about and understand offers powerful and supportive online, networked learning communities. From the wealth of professional blogs to social networks for professional learning to following peers as they tweet their own “aha moments” and share resources on Twitter, professional sharing has never been more broadly available. From the naturally digital to the nurtured digital in all of us, we can open our minds to learning, explore new frontiers, exploit opportunities for networked learning, and then engage ourselves as digital learners.

Breaking through our own learning barriers as they relate to technology and engaging ourselves in online learning communities positions teacher-librarians as leaders in bridging the new learning divide. We can and should lead our peers into the new work of the school as a learning commons, where learning to learn is the most important literacy of all.

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