
Digital Natives, 21st Century School Libraries, and 21st Century Preparation Programs: An Informal Affirmation of Branch and deGroot

Cynthia Houston
Western Kentucky University, USA

The presentations from the 2011 IASL conference theme School Libraries: Empowering the 21st Century Learner offered much to think about for graduate programs preparing future teacher librarians. Research indicates that school librarians are not actively integrating Web 2.0 tools into their programs, but students are regularly using these tools outside of school for accessing and sharing information. Professional preparation programs must help future librarians master these tools so they can be school leaders on the Web 2.0 technology frontier. This paper discusses issues related to Web 2.0 integration in online graduate programs in school librarianship and offers examples of Web 2.0 activities that can be used in graduate courses.

Introduction

My how time flies! I have just spent the last hour on Facebook chatting with my friend and colleague, with whom I attended the 49th annual International Association of School Librarianship (IASL) conference in Kingston, Jamaica in August 2011. We were just sharing our views on yellow versus black plantains, recipes for mango sorbet and other important tidbits of information from the conference. At the same time, I was “hanging out” on Google Plus with my daughter, chatting about the new hire at her library and a new date for the upcoming state fair. Just moments before, I posted some links on our WKU Library Media Education (LME) program's Facebook page promoting International School Library Month and our state library association's upcoming conference. While yesterday I was on Skype, chatting with a colleague in Spain about various personal and professional matters. By the way, the weather in Barcelona is superb! Tomorrow I plan to create YouTube videos and Podomatic podcasts for graduate students in my online classes in school librarianship to help them get started with the semester, and I have yet to begin my day's work! Or have I? That's just how our learning ecology works online. When we use these tools simultaneously for work and play, the boundaries between learning in our personal and professional lives start to blur and intersect.

In writing this article, I have come to realize that I have become the subject of my own research! It seems that lately that my own interests and experiences drive much of my current research in teacher librarianship. So, here I sit, laptop in hand, iPod at the ready, busy creating and sharing information in the personal, professional, and academic areas of my life using Web 2.0 applications. Coincidentally, these very activities were the subject of

Copyright of works published in *School Libraries Worldwide* is jointly held by the author(s) and by the International Association of School Librarianship. The author(s) retain copyright of their works, but give permission to the International Association of School Librarianship to reprint their works in collections or other such documents published by or on behalf of the International Association of School Librarianship. Author(s) who give permission for their works to be reprinted elsewhere should inform the Editor of *School Libraries Worldwide* and should ensure that the following appears with the article: Reprinted, with permission, from *School Libraries Worldwide*, Volume 18, Number 1, January 2012 pages 138-143.

my research on Web 2.0 tool usage last semester (Houston, 2011). My interest at the time was in exploring the learning ecology of our graduate students' use of Web 2.0 tools in the different areas of their lives to better understand what they know and what they might need to learn about this exciting educational technology frontier.

I use the learning ecology framework because the Web 2.0 tools we use for informal learning have the potential to influence teach in formal environments, and vice versa (Barron, 2006). In my own case, I started a travel blog with my friend and parlayed this knowledge into developing a blog for my graduate students on Web 2.0 information resources. As this example demonstrates, the learning ecology perspective moves Web 2.0 tools to the forefront of teaching and learning in the 21st century because of the way we tend to use them in different learning contexts, and the potential they have to merge our learning experiences from one context into another. This is especially true for our young "digital natives" who use Web 2.0 applications regularly for informal learning activities. Researchers assert that these 21st century tools could have powerful formal educational applications if they are effectively integrated into learning experiences taking place inside the school walls (Barron, 2006; Zhao & Frank, 2003).

Aside from developing a keen affection for Jamaican cuisine, my most valuable souvenir from the IASL conference was the overwhelming sense of urgency I felt to integrate Web 2.0 tools into my online graduate courses in teacher librarianship. The presentation made at IASL by Jennifer Branch provided me with some guidance on how to go about incorporating Web 2.0 into my courses, providing a nurturing and supportive educational environment, and moving students along the technology integration continuum from Entry level to Invention (Branch & deGroot, 2011; Dwyer, Ringstaff, & Sandholtz, 1991). Her presentation described how students in her online classes received support and guidance in the exploration of the Web 2.0 tools of their choice. At the end of the class, the instructors found there was more balanced usage of Web 2.0 tools, and students felt added confidence in taking on the role of technology leader in their school.

My own sense of urgency actually stems from a startling discovery I made while researching Web 2.0 tool usage among our graduate students in LME program at Western Kentucky University. Table 1 shows some of the results of a survey of our students' use of Web 2.0 tools, which indicate that usage is at its lowest level in the formal or academic learning area of their lives. (Houston, 2011).

Table 1: Web 2.0 Tools Frequently Used by Teacher librarian Candidates at Western Kentucky University for Personal, Professional, or Academic Purposes (N=40)

Tool	Personal	Professional	Academic
Social Networking, e.g., Facebook	29 (71.5%)	9 (21.4%)	2 (4.8%)
Communication, e.g., text or Skype	26 (64.3%)	9 (21.4%)	4 (9.5%)
Photo/Video Sharing, e.g., Youtube, Photobucket	18 (45.2%)	8 (19.1%)	2 (4.8%)
Blogs	11 (28.6%)	5 (11.9%)	6 (14.3%)
Wikis	3 (7.1%)	2 (4.8%)	3 (7.1%)
Productivity Tools, e.g., Google Docs	10 (24%)	3 (7.1%)	3 (7.2%)
Online Surveys	5 (11.9%)	2 (4.8%)	2 (4.8%)

Apparently as a faculty, my colleagues and I have not been making extensive use of these tools in our educational activities. How more direct could these results be in pointing out that our graduate program is not preparing our students for the Web 2.0 world to come!

What I did not know then, but fully understand now, is that many of us in the teacher librarian training business are concerned by recent data showing school librarians are not big users of social networking, blogs, wikis, or photo/video sharing tools in their schools and are infrequent users of powerful educational tools such as RSS feeds, podcasts, digital storytelling, social gaming, and virtual worlds (Baumbach, 2009; Farmer & Shontz, 2009; Hassell and Hanson-Baldauf, 2008) This is a core concern because as school librarians struggle with the issue of maintaining relevancy in the digital age, advocating and promoting the use of Web 2.0 tools in schools should be a daily activity, especially as a majority of their students are using them regularly and enthusiastically (Todd, 2008).

My own in-process research indicates that a majority of students in our program report that they are using some of the more popular Web 2.0 tools in their personal lives, but this usage declines precipitously when students are asked which tools they use in their schools or as part of their academic programs (Houston, 2011). The reasons they provide for this decline include: lack of time to learn new technology; lack of knowledge of the Web 2.0 tools available; lack of access to the bandwidth these tools require; and lack of access to these tools at school because of Internet filters. These reasons are not surprising and have surfaced time and time again in technology utilization surveys conducted in schools (Baumbach, 2009; Farmer & Shontz, 2009). Earlier research also pointed to school library preparation programs that do not effectively integrate Web 2.0 technologies into their coursework, leaving future school librarians ill-prepared to provide leadership in the use of these tools in their schools (Hassell & Hanson-Baldauf, 2007).

Other research indicated that attitude towards technology integration is not the issue with Web 2.0 tools. Recent research by Mardis and Everhart (2010) indicated that school librarians are more than ready to take on new technologies and become the leaders of innovation in their schools. In their survey of National Board certified teacher-librarians, a majority responded that they were actively collaborating with teacher on technology integration and were ready to act with confidence as technology leaders. Recent research by Branch and de Groot (2011) supported this finding and indicated that among graduate students in school librarianship "attitude toward technology was found to be the strongest predictor of teacher technology adoption and use" (p. 33).

Where do teacher librarian preparation programs fit into this puzzle? In my view, our programs can build the bridge across the digital divide by providing an environment for our students to experiment and explore the world of Web 2.0. Recent research conducted by Branch and de Groot (2011) indicated that when these tools are introduced in a supportive online environment, teacher librarian candidates adopt them with enthusiasm. Given all the new standards and initiatives propelling toward 21st century learning and technology tools, it is past time that educators of school librarians give their methods of instruction reconsideration. Since many graduate programs in school librarianship are online, infusing more technology should not be an impossible task. Yet, given the recent data on professional school librarians and teacher librarian candidates use of Web 2.0 tools, we are left to determine how preparation programs can best bridge the divide between personal, professional, and academic use of these resources and help students make use of a wide variety of Web 2.0 Tools in 21st century learning environments.

The American Association of School Librarians (AASL) clearly sets the bar high in its standards for 21st century learners and school library programs. Both sets of standards clearly state that it is the role of school librarians to provide guidance for students and leadership for the school in skills, tools, and resources for 21st century learning (AASL, 2009a, 2009b). However, my own research indicates that the learning ecology of students in our own teacher librarian preparation program is rather narrow (Houston, 2011). Given the abundance of Web 2.0 tools there are to be used, a majority of students in our program tend to stick to social networking tools, photo/video sharing sites, and communication tools for sharing information with friends and family. Although there is some use of these tools in their professional lives, rarely do they use these tools as part of their academic program. This is much more so the case when considering the use of some of the tools which have been touted in the literature as having some real power in the educational realm, such as Podcasts, RSS feeds, social gaming and virtual worlds (Champlin, Miller, & Loertscher, 2009; Williams & Loertscher, 2008).

School library programs have been criticized over the years for not including important skills in their programs. Some evaluations of school library programs suggest more of a focus on curriculum integration, cooperative planning, teaching adult learners, and the leadership skills, rather than an emphasis on Web 2.0 technology integration (Shannon, 2002; Vansickle, 2000). Other evaluations of skills and abilities deemed important for the profession rank technology ability rather low on a list of attributes of effective school librarians. For example, a recent nationwide survey of school librarians placed interpersonal skills, multitasking ability, the desire to help others, a sense of humor, and knowledge of

books above technology ability, which only 44 percent of those surveyed thought most contributed to a librarian's success (Kenny, 2009).

I believe there are some other issues at play that have contributed to the set of circumstances online academic programs are now facing. Over the past twelve years, we have experienced some uninformed biases against online learning from our profession. Many of our colleagues in the field of librarianship believe online programs lack rigor and oversight in comparison with traditional graduate programs (Glover, 2005; Kim & Kusack, 2005; Kolowich, 2010). Given this environment, even though our program is online, our methods and assignments tend to be fairly traditional, involving the use of textbooks, requiring academic papers, lesson plans, and annotated bibliographies. As a member of the faculty, I personally struggle with the notion that student-generated items submitted to our Electronic Portfolio System could be of a dynamic and changeable nature, such as blogs and wikis, which are stored "in the cloud," rather than on our university server. I also struggle with how to evaluate an individual's level of mastery of AASL standards on interdisciplinary and collaborative Web 2.0 assignments, which by nature have more than one author and are subject to continuous revision and editing. Finally, my students and I both struggle with the 100 megabyte file size limitations of our online learning platform, which effectively excludes the use of audio, video or large graphic files from the types of evidence students can include in their assignments. For these reasons, many of our assignments used to evaluate our students' mastery of standards are fairly conventional and take the form of academic papers, lesson plans, and PowerPoint presentations. This tendency is reinforced by AASL (2009a) recommendations that assessments used for program evaluation align with the accountability system used by the academic unit, in our case, the School of Teacher Education.

It is clear that teacher librarian preparation programs must integrate Web 2.0 technology into instruction in order to become the models for 21st century teaching and learning practice. The issue, however, remains that, given the academic constraints of compliance with professional standards, course management, and electronic portfolio systems, how do teacher librarian educators create a nurturing and supportive environment for moving our students to high levels of Web 2.0 technology integration in their schools? When Web 2.0 technology must be integrated into existing courses, then a significant change in educational practice must take place. There must be more acceptance of assignments that are collaborative in nature and make use of new technologies. Programs must allow time and opportunities for students to explore new technologies with room for trial and error.

My Personal Promise to Integrate Web 2.0 into my Courses

As a result of my experiences at the IASL Jamaica conference, I committed myself to these goals for the 2011-2012 school year and plan to take the following actions toward Web 2.0 integration in a step-by-step fashion:

- Step 1. Determine which existing assignments lend themselves to a Web 2.0 tool and then integrate a different Web 2.0 tool into each class;
- Step 2: Assess the impact of these changes through student surveys;
- Step 3: Revise assignments and activities based on student feedback.

Starting in fall 2011, I have made the following adaptations to existing assignments in my courses, none of which required drastic revisions:

- 1. Integrate Wordle into a cataloging course discussion board activity on controlled vs. uncontrolled vocabulary to demonstrate the power of social tagging, folksonomy, and tag clouds.
- 2. Integrate online catalogs and sites such as Library Thing and Shelfari that have reviewer and recommender features into a cataloging course discussion board activity to demonstrate the effectiveness of these tools for developing a more patron-centered library catalog.
- 3. Integrate student field experience blogs into the practicum course as the means for students to provide a multimedia-rich document of their activities
- 4. Integrate the use of digital storytelling tools into the professional portfolio assignment to require students to present information about their practicum

experience in an engaging manner.

5. Integrate pod and vod casting into a reference collection assignment to demonstrate the effectiveness of multimedia tools in reference services.
6. Require the use of Web 2.0 presentation tools or sharing sites into an information inquiry assignment to demonstrate the power of these tools to create and/or distribute peer presentations.

I will know better at the end of the year how effective I have been in moving students along the technology integration continuum. I know it will be a challenge for both of us!

References

- American Association for School Librarians (AASL). (2009a). *ALA/AASL standards for initial programs for school librarian preparation*. Chicago, IL: American Library Association. Retrieved from http://www.ala.org/ala/mgrps/divs/aasl/aasleducation/schoollibrary/Draft_revised_AASL_standards_for_comment.pdf
- American Association for School Librarians (AASL). (2009b). *Empowering learners: Guidelines for school library media programs*. Chicago, IL: American Library Association.
- Barron, B. (2006). Interest and self-sustained learning as catalysts of development: A learning ecologies perspective. *Human Development*, 49, 193–224.
- Baumbach, D. J. (2009). Web 2.0 & YOU. *Knowledge Quest*, 37(4), 12-19. Retrieved from EBSCOhost.
- Branch, J., & de Groot, J (2011). The power of Web 2.0: Teacher-librarians become school technology leaders. *School Libraries Worldwide*, 17(2), 25-40.
- Buckenmeyer, J. A. (2010). Beyond computers in the classroom: Factors related to technology adoption to enhance teaching and learning. *Contemporary Issues in Education Research*, 3, 27-35.
- Champlin, C., Miller, N., & Loertscher, D. (2009). *A painless guide to research using Web 2.0 Tools*. Spring, TX; Hi Willow Research and Publishing.
- Everhart, N., Mardis, M., & Johnston, M. (2010). The leadership role of the teacher librarian in technology integration: Early results of a survey of highly certified teacher librarians in the United States. In *Diversity Challenge Resilience: School Libraries in Action: Proceedings of the 12th Biennial School Library Association of Queensland, the 39th International Association of School Librarianship Annual Conference incorporating the 14th International Forum on Research in School Librarianship*, Brisbane, Australia. Erie, PA: International Association of School Librarianship. Retrieved from <http://etl504g1.wikispaces.com/file/view/Leadership+role+of+TL+in+technology+integration.pdf>.
- Everhart, N. & Dresang, E. T. (2006). School library media specialists for the 21st century: Leaders educated to make a difference. Paper presented at the *Association for Library and Information Science Education [ALISE] National Conference, January 16-19, San Antonio, TX*. Retrieved from [http://www.alise.org/index.php?option=com_content&view=article&id=461#dresanghttp://www.alise.org/index.php?option=com_content&view=article&id=461#dresanghttp://www.alise.org/index.php?option=com_content&view=article&id=461#dresanghttp://www.alise.org/index.php?option=com_content&view=article&id=461#dresang](http://www.alise.org/index.php?option=com_content&view=article&id=461#dresanghttp://www.alise.org/index.php?option=com_content&view=article&id=461#dresanghttp://www.alise.org/index.php?option=com_content&view=article&id=461#dresanghttp://www.alise.org/index.php?option=com_content&view=article&id=461#dresanghttp://www.alise.org/index.php?option=com_content&view=article&id=461#dresang)
- Farmer, L., & Shontz, M. (2009). Spending survey. *School Library Journal*, 55(4), 35-44. Retrieved from EBSCO Host.
- Glover, K. (2005). NextGen: Don't discredit my online degree. *Library Journal*. Retrieved from <http://www.libraryjournal.com/article/CA6269436.html>
- Greenhow, C., Robelia, B., & Hughes, J. E. (2009). Learning, teaching, and scholarship in a digital age: Web 2.0 and classroom research: What path should we take now? *Educational Researcher*, 38(4), 246–259.
- Hanson-Baldauf, D., & Hassell, S. H. (2009). The information and communication technology competencies of students enrolled in school library media certification programs. *Library & Information Science Research*, 31, 3-11.
- Houston, C. (2011). The learning ecology of Web 2.0 tool use by teacher librarian candidates. Paper presented at *School Libraries: Empowering the 21st Century Learner, University of West Indies the 40th International Association of School Librarianship Annual Conference incorporating the 15th International Forum on Research in School Librarianship*, Kingston, Jamaica, 6-10 August.
- Hughes-Hassell, S., & Hanson-Baldauf, D. (2008). Information and communication technology use by North Carolina school library media specialists: Perceived competencies and barriers. *School Library Media Research*, 11. Retrieved from http://www.ala.org/ala/mgrps/divs/aasl/aaslpubsandjournals/slmrb/slmrcontents/volume11/hughes_hassell.cfm

- Kenney, B. (2009, January 1). Librarians of tomorrow. *School Library Journal*. Retrieved from <http://www.schoollibraryjournal.com/article/CA6624788.htm>
- Kim, H., & Kusack, J. (2005) Distance education and the new MLS: The employer's perspective. *Journal of Education for Library and Information Science*, 46(1), 36-52.
- Kolowich, Steve. (2010, November). Internal barriers to online expansion. *Inside Higher Education*. <http://www.insidehighered.com/news/2010/11/12/online>
- Murugaiah, P., Azman, H., Ya'acob, A., & Thang, S. M. (2010). Blogging in teacher professional development: Its role in building computer-assisted language teaching skills. *International Journal of Education and Development using Information and Communication Technology*, 6(3), 73-87. Retrieved from <http://ijedict.dec.uwi.edu/viewissue.php?id=26>
- Oliver, K. (2007). Leveraging Web 2.0 in the redesign of a graduate-level technology integration course. *TechTrends*, 51(5), 55-61.
- Shannon, D. (2002). The education and competencies of school library media specialists: A review of the literature. *School Library Media Research*, 5. Retrieved from <http://www.ala.org/aasl/SLMR/vol5/litreview/litreview.html>
- Todd, R. J. (2008). Youth and their virtual networked worlds: Research findings and implications for school libraries. *School Libraries Worldwide*, 14(2), 19-34.
- Vansickle, S. (2000). Educating preservice media specialists: developing school leaders: A study of school librarianship students at five library schools. *School Libraries Worldwide*, 6(2), 1-2
- Williams, R., & Loertscher, D. (2008). *In command! Kids and teens build and manage their own information spaces, and learn to manage themselves in those spaces*. Spring, TX: Hi Willow Research and Publishing.
- Zhao, Y., & Frank, K. A. (2003). Factors affecting technology uses in schools: An ecological perspective. *American Educational Research Journal*, 40(4), 807-840.

Author Note

Cynthia Houston is an associate professor of Library Media Education at Western Kentucky University. Her research interests range from exploring the dynamic world of digital resources, to bilingual children's literature, international comparative librarianship, and monitoring the status of school library programs in Kentucky.