Emerging Trends in Digital Citizenship in Pre-Service Teacher Practice

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We live in an age of accelerating change, exponential information growth, and evolving technologies. While these changes are enabling many youth to become more civically engaged and raise questions about the nature of citizenship and civic participation in a digital age, educators have been slow to recognize and respond to such changes. Our schools are challenged by the digital disconnect (Friedman and Hicks, 2006) between students who are "digital natives," for whom technology is ubiquitous and whose lives have been shaped by nearly instant and interactive access to the world, and "digital immigrants," describing many teachers who have adapted to technology but not entirely embraced it (Prensky, 2001). Despite the digital divide more of our students are coming to school with technology at their fingertips: cell phones, media players, game devices, and laptop computers. It is no longer sufficient for students to learn about technology; they
must also learn how to use multiple technologies as tools for learning, communication, and participation, both locally and globally. How can teachers take advantage of our students’ enthusiasm for using digital media to support their civic engagement?

The Partnership for 21st Century Skills (2007) developed student outcomes representing the skills, knowledge, and expertise for success in 21st Century work and life. The 21st Century Skills Map for English (2008) demonstrates how technology can be integrated into language arts to teach creativity, critical thinking and problem solving, communication, collaboration, and information and media literacies. The International Society for Technology in Education (ISTE) developed technology standards for teachers and students, which inform expectations for citizenship skills in a digital age. The ISTE’s National Educational Technology Standards for Students: The Next Generation (ISTE 2007) reflect a growing consensus that the digital world requires students who can use technology as a tool for research, to think critically and creatively, construct knowledge, communicate and work collaboratively, and use information to problem solve and make decisions. These are essential citizenship skills.

The ideas in this article are based on research I conducted in a longitudinal eight-year study of the use of technologies to develop 21st Century citizenship skills. (Thieman, 2008). Specific examples in this article represent a sub-set of data involving 48 secondary pre-service teachers who attended a graduate teacher education program between 2008 and 2010 at an urban university in the Pacific Northwest. All of the urban schools and many of the suburban and rural schools represented in this research had high populations of students who are poor, linguistically and racially diverse, and who qualify for special services. A few schools had adequate technology in all classrooms; however, most of the pre-service teachers lacked access to adequate technology in the secondary schools. I have organized the technology examples around five aspects of digital citizenship. While most of the examples feature social studies content, the technologies are equally applicable to language arts classrooms.

1. Responsible citizens are informed; they are able to access, research, manage, evaluate and use information. Secondary students’ access to information has been greatly enhanced by the variety of digital tools, which were not readily available when my research began in 2002. While the digital divide between technology-rich and technology-poor schools continues to exist within and across the districts in this study, pre-service teachers overcame limitations to engage their students in research. For many of the topics, the Internet was the only source of information as school libraries were inadequate and textbooks were outdated.

A middle school pre-service teacher created an informative brochure and posted resources on her blog so that her students could learn about the ongoing conflict in Darfur. Students accessed a web site to analyze their personal ecological footprint and learn ways to reduce their consumption of resources (http://www.myfootprint.org/). Others examined online photos and documents, revealing perspectives on the women’s rights and civil rights movements, which were not available in their textbook. Students traced the origin and processing locations of the components of manufactured items to better understand the globalization of trade.

The Internet hosts a rich depository of music and video clips, most notably on youtube (http://youtube.com) but also on sponsored websites such as the National Archives (http://loc.gov) and the National Endowment for the Humanities (http://edsitement.neh.gov/). High school students investigated the influence of popular culture by analyzing lyrics from 1920s blues and jazz music, 1960s civil rights and anti-war songs, and comparing historic music to contemporary rap. Students accessed online digital video libraries, e.g., analyzing the Presidential debates of the 1960 and 2008 elections, investigating how the 1920s challenged social norms, exploring the Harlem Renaissance and the New Deal, and examining how media perpetuates stereotypes. Middle school students listened to a podcast on early 19th Century reform movements. Searchable images now rival text as information sources and are especially appealing to K-12 students. Students analyzed digital
photos, historical and political cartoons and consumer ads. Middle school students completed interactive map activities with Google Earth.

2. Informed citizens understand complex public issues and diverse perspectives. Many of the work samples that featured online research also illustrated students’ comparison and contrast of public issues and multiple perspectives, e.g., the Obama economic stimulus plan and the New Deal policies of Roosevelt, the preambles of the United Nations Declaration of Human Rights and the U.S. Constitution, and Martin Luther King’s “I Have a Dream” speech and Barack Obama’s speech on race. Middle school students analyzed quotes from former slaves and historic figures as well as antebellum legislation to understand Northern and Southern perspectives prior to the Civil War.

Pre-service teachers created digital archive accounts (e.g., http://www.portaportal.com) to organize digital resources and facilitate their students’ research and analysis of complex issues. In addition, pre-service teachers created web-quests to enhance students’ research, e.g., on social change in the 20th Century (http://zunal.com/webquest.php?user=38073) and on social justice in the civil rights movement (http://zunal.com/webquest.php?user=23987).

3. Competent citizens think critically and creatively, evaluate and make informed decisions. The pre-service teachers in this study fostered creative ways for their students to express learning. Tenth grade students analyzed print and online U.S. and international news headlines, graphing the changes in Chinese government policy over time. In a unit on the U.S. civil rights movement, students wrote poems from the perspective of African American soldiers returning home after World War II to racist Jim Crow laws or from the viewpoint of African American women who were fired from their wartime manufacturing jobs when white servicemen returned.

Students created graphic organizers (http://www.inspiration.com/) to compare ancient and contemporary government systems. More tech savvy students created movies using digital tools such as iMovie (Macintosh) and Windows Movie Maker (PC). Others used a visual ranking tool to prioritize the lasting importance of historical figures (http://www.intel.com/about/corporateresponsibility/education/k12/tools.htm). While studying urbanization, students examined digital photos of historic Roman sites and then created dough art replicas. They also took digital photos of contemporary examples of similar sites in their community. After studying Japanese American internment during World War II students created a newsletter from one of the camps and created artwork and poetry from the perspective of internees. Using principles of online simulation games, eighth grade students created a civil war personality and created a “My America Facepage” from the avatar’s perspective; however, the students did not post their creations.

4. Effective citizens communicate with diverse audiences. K–12 students’ communication ranged from interviews and traditional letters to digital emails and wiki postings. Eighth graders interviewed family members and neighbors about reform movements they had experienced and about reforms which are currently needed. Students in a sheltered social studies class wrote letters to their senators regarding an issue which concerned many of them—U.S. immigration policy. High school students emailed their congressional representatives to share their opinions on the Economic Stimulus Act. A secondary social studies class studied concepts of representative democracy and looked at effective tactics of protest movements. The teacher posted a link for students to email their congressional representatives. When students began to receive personal responses from their representatives, they could see they had in fact played a role in the democratic process. Students at an alternative school for homeless teens became investigative reporters, conducted interviews, and published a “zine” to dispel myths and stereotypes of homeless youth. High school students in a world history class chose a published article about a contemporary issue related to Southeast Asia. After researching the issue from multiple perspectives, the students wrote a position paper and sent it to the author of the original article they read.
Pre-service teachers also created websites, wikis and blogs to communicate with their students and parents. Secondary students could also comment on opinions shared by the teacher and fellow students. Four graduates of the program shared their sites and commented how easy it is to use these communication tools:

- http://ken-trillium.blogspot.com/
- http://gstuckart.wikispaces.com
- http://whspol.wikispaces.com/
- http://sites.google.com/site/mswilkinsononline.

5. Committed citizens work collaboratively to solve problems. All of the pre-service teachers in this study made ample use of cooperative learning groups. Students engaged in group research on a variety of topics and shared their knowledge through role plays, skits, simulations, multimedia presentations, and web-quests. Several recent graduates use Survey Monkey to obtain feedback from secondary students, (http://www.surveymonkey.com/s/62LSM6P) or to enable students to evaluate the work of each collaborative group (http://www.surveymonkey.com/s.aspx?sm=5TQvKHXNatubR7pAcVLu Q_3d_3d).

So far, none of the students has collaborated in international projects such as iEarn (http://www.iearn.org/) or Taking It Global (http://www.tigweb.org/). Both of these organizations connect teachers, students, and curriculum projects all over the world.

To summarize, four of the five aspects of digital citizenship (1–4) are well represented by this research. There is an emphasis on research and information fluency with multiple opportunities for students to understand complex issues, think critically and creatively. Creative expression is supported by such technologies as graphic organizers, illustration and presentation software, wikis, blogs, and podcasts. The fifth aspect of digital citizenship, using technology to communicate, collaborate, and solve problems beyond the classroom, was least well developed by the pre-service teachers in this study. In most cases, the problems and issues were selected by the pre-service teachers to reflect approved curriculum, and their students’ conclusions were communicated only to the teacher or fellow classmates. Most pre-service teachers did not encourage their students to take advantage of the power of emerging technologies for communicating and taking action on civic matters. Some cooperating teachers would not allow their pre-service teachers to post student work. Using technology to work collaboratively and solve problems was limited in most cases to cooperative group work without the use of Web 2.0 technology. The push for content coverage, the lack of support by supervising teachers, and the limited time for pre-service teachers to complete their work samples severely limited the amount of time for in-depth collaboration and problem solving of real world issues.

Educators face several challenges related to the use of technology to enable students to become civically competent (O’Brien, 2008). First, while young people are fairly well versed in the social use of emerging technologies, many teachers do not encourage students to use such technologies for academic and civic purposes. Second, a new type of digital disconnect is emerging: students outside the classroom are technologically connected to their various social networks but are asked to “power down” as they walk into the classroom. Third, while some students are gaining experiences in an online environment, few attempts are made to draw connections between these technology-supported experiences and civic matters. As Bennett (2008) noted: “A challenging question is how to better integrate the social and public worlds of young people online” (p. 11). Continued research into emerging trends in digital citizenship in pre-service education can help teachers address these challenges.

REFERENCES


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Will eBooks Replace Traditional Texts?

Ian Hochstrasser

Since Gutenberg invented moveable type and the printing press, the printed word has become an influential part of culture. This print culture gave people the opportunity to disseminate information in a way that transcended the boundaries of oral culture. The printed word made knowledge storable, portable, and helped the word travel distances through time and space. Because of its power, the book became revered, sacred, holy.

The Internet began much like the book, primarily to make information available quickly and effectively. Welcome to Web 1.0. The information, however, could not be limited. People began to post opinions and publish their own books and reading materials straight to the web, bypassing publishers and the printing presses. From this moment on, the book began to feel threatened. Or should I say, book-lovers began to feel that books were becoming an endangered species.

I have a dirty little secret. I am a booklover, a bibliophile, and I bought a Kindle. I was untrusting of the little thing, too, and still am to an extent. I don’t like not being able to write in my books. I like the grit of the paper on my fingertips, the soft slick cover of a paperback or the rough tough cover of a hardback. I love to look at the covers of books as well.

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