Different continents similar challenges: integrating social media in teacher education
Continentes diferentes, desafios semelhantes: integração da mídia social na formação de professores

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Resumo: Este estudo descreve o papel do Software para Interação Social (SIS) na formação de professores; fornece os resultados de um projeto de pesquisa participativa nos EUA e no Turquemenistão; oferece estratégias criativas e possibilidades de integração de tecnologias da Web 2.0 no currículo do ensino fundamental com recursos limitados e equipamentos; descreve as reações dos participantes e as experiências com novas tecnologias; e apresenta seus projetos de currículo. O estudo foi realizado nos cursos de tecnologia de ensino interdisciplinar e investigou 13 candidatos a professores dos EUA e 15 professores no Turquemenistão. A referida pesquisa explorou vasta gama de significados associados aos participantes com as novas mídias e tecnologias, o impacto do SIS na formação de professores; e formas em que os participantes integraram os novos meios de comunicação em seus projetos. Candidatos a professores e professores questionaram os desafios e as vantagens dos dispositivos portáteis como ferramentas em sala de aula; habilidades desenvolvidas na desconstrução de currículos existentes para melhorar os resultados dos alunos.

Palavras-chave: *software* de interação social, educação de professor, tecnologias *web*.

Abstract: This study outlines the role of Social Interaction Software (SIS) in teacher education; provides the results of participatory research project in the US and Turkmenistan; offers creative strategies and possibilities for integrating Web 2.0 technologies into the K-12 curriculum with limited resources and equipment; describes participants' reactions and experiences with new technologies; and showcases their curriculum projects. The study conducted while teaching interdisciplinary technology courses and investigated 13 teacher candidates in the US and 15 teachers in Turkmenistan. The study explored wide range of meanings participants associated with new media and technologies; impact of SIS in teacher education; and ways in which participants integrated new media into their projects. Teacher candidates and teachers argued challenges and advantages of handheld devices as classroom tools; developed skills in deconstructing existing curricula for improving student outcomes.

Keywords: social interaction software, teacher education, web technology.

Good teachers possess a capacity for connectedness.

They are able to weave a complex web of connections among themselves, their subjects, and their students so that students can learn to weave a world for themselves…

The connections made by good teachers are held not in their intellects but in their hearts-meaning hearts in the ancient sense, as the place where intellect, emotion and will converge.

Parker Palmer, The Courage to Teach

INTRODUCTION

This paper outlines the role of Social Interaction Software (SIS) in teacher education; provides the results of participatory research project in the US and Turkmenistan; offers creative strategies and possibilities for integrating Web 2.0 technologies into the K-12 curriculum with limited resources and equipment; describes participants' reactions and experiences with new technologies; and showcases their curriculum projects. The study conducted while teaching interdisciplinary technology courses and investigated 13 teacher candidates in the US and 15 teachers in Turkmenistan. The study explored wide range of meanings participants associated with new media and technologies; impact of SIS in teacher education; and ways in which participants integrated new media into their projects. Teacher candidates and teachers argued challenges and advantages of handheld devices as classroom tools; developed skills in deconstructing existing curricula for improving student outcomes.

PURPOSE & OBJECTIVES

The research questions the role of new media and technologies in designing effective instruction in K12 curriculum. This paper describes Gallery Walk and Hi5 (Hiking for Health, Happiness, Head, Hand and Heart) to Nature projects that integrate Maps and Media Literacy in K12 curriculum; explores experiential learning activities that teacher candidates in the US and teachers in Turkmenistan developed integrating new technologies into their lesson plans; and promotes new media literacies in teacher education. We explored wide range of meanings participants and K12 students associated with experiential learning activities; impact of new media and technologies in the curriculum; the ways in which teacher candidates and teachers integrate maps and media into their curriculum projects; and how their students gained alternative points of view on environment and renewed interest and commitment to community service.

The purpose of this study was to meaningfully integrate geography and social networking software into the K12 curriculum as a means of further developing their media literacy skills by having them develop collaborative and community based projects for K-12 students. This research project relates to several International Standards for Technology in Education's (ISTE) National Education Technology Standards for Teachers, but most specifically relates to Standard One, "Facilitate and Inspire Student Learning and Creativity: Teachers use their knowledge of subject matter, teaching and learning, and technology to facilitate experiences that advance student learning, creativity, and innovation in both face-to-face and virtual environments." (ISTE, 2008, p.1)

Our goal was to: a) To present the role of new technologies in order to argue the challenges and advantages of Global Positioning System (GPS) and Social Interaction Software (SIS) in K-12 curriculum across content areas; b) To introduce maps and media across content areas in developing multiple literacies such as information, technology, geography, numerical and media literacy: c) to demonstrate creative strategies and possibilities for engaging K-12 students in meaningful literacy activities while incorporating maps and media.

PERSPECTIVE/THEORETICAL FRAMEWORK

The study focuses on the impact and power of Global Positioning System (GPS) and Social Interaction Software (SIS) and outlines its promising implications for education, creativity and collaboration among its users. Social Interaction Technologies and Collaboration Software have been changing the way we experience our world. Social interaction software has great benefits for education. From showcasing digital portfolios (second life) to posting online reflections and journals (blogspot), co-writing books (wikibooks) to co-producing digital stories (voicethread, footnote), social interaction software is increasingly being used for educational and lifelong learning environments. The usage of handheld devices and social interaction software develops opportunities and supports "Open Learning" practices and processes, and promotes exchanges, connections, and collaboration among people who share common ideas and interests.

Research documents how Global Positioning System (GPS) and Social Interaction Software (SIS) can be used to support traditional literacy practices as well as facilitate the further development of multiple and critical literacies. According to Jenkins, Purushotma, Clinton, Weigel, and Robinson (2006), "The new literacies almost all involve social skills developed through collaboration and networking. These skills build on the foundation of traditional literacy, research skills, technical skills, and critical analysis skills taught in the classroom. (p. 4)" National Standards such as International Society for Technology in Education (ISTE) and International Reading Association (IRA) advocates the use a wide range of instructional tools, and curriculum materials to support instruction and promotes access for students to a new media and technologies in classrooms and libraries.

The Partnership for 21st Century Skills (2007) suggests that teaching and learning in the 21st century requires that students and teachers have: subject specific knowledge, learning skills, use 21st century tools to foster learning, teach and learn in the 21st century context, connect learning to the real world, and use assessments that measure 21st century learning. Therefore, teacher knowledge about technology and their ability to incorporate technology into their K-12 classes are important aspects of the teaching and learning process. Educators need to be familiar with technology so that they can promote students' technology, information, and critical literacy skills and better prepare K-12 students for the literacy demands they encounter as citizens in the 21st century.

Social interaction software allows greater student independence and critical autonomy (Masterman, 1985, p 24-25), greater collaboration, and increased pedagogic efficiency (Franklin & Van Harmelen, 2007). It also provides learners with an effective method of acquiring the 21st century skills. Tucker (2007) cites Bugeja's "digital displacement" phenomena: "though family members may be sharing the same physical space, psychologically each one may be in his or her own little universe, making difficult for parents to penetrate the child's universe, and impairing communication." (p. 3) Bugeja (2008) warns of digital distractions and outlines significant issues to consider in implementing changes in education. He writes: "Due to academia's reliance on technology and the media's overemphasis on trivia, we are failing to inform future generations about social problems that require critical thinking and interpersonal intelligence." (p. 66)

As corporate entities create pressure from the outside, coming up with new technologies on a minute by minute basis, Noon (2007) questions what it means to be a media literate "global citizen" and questions the role of schools in preparing students for the work force. Gould (2003) argues we tend to promote the need for a productive citizenry rather than a critical, socially responsive, reflective individual." (p. 197)

Jenkins et al. (2006) highlighted some of the additional core concerns and challenges integrating new media into the classroom settings: (1) participation gap - opportunities and inequalities in accessing new media technologies; (2) transparency problem - children need to be actively guided in reflecting on their media experience; (3) ethics challenge - children need help developing the ethical norms to cope with online environments. To address these challenges, educators, parents, and community need to work

together, rethink which core skills and competencies the younger generation need in their education, and redesign a curriculum to prepare them for the future. Instead of banning resources, such as Wikipedia, or being fearful of these technologies, Prensky (2005) suggests that as "educators our duty is to teach our students to understand both the power and the limitations of all the new technological tools that are, and will increasingly be, at our kids' disposal. It is our job to show them how they can use all these new tools well, and wisely." (p. 1)

Freire's (1993) notions of "dialogue" in education insist on breaking the "contradiction" of the teacher-student relationship (p. 72). He was critical of the "banking education," wherein learners are asked to file and silently absorb the deposits that they are imparted from the oppressor. Srinivasan (2006) adds, "Liberating education consists in acts of cognition, not transferals of information." Today, various tools such as instant messaging, webcams, and digital voice recorders bring multicultural voices into the classroom and liberates teachers and students from a textbook format. Curriculum can be redesigned based on the needs and aspirations of the students. Social software provides profound changes in open educational settings that are based on a social re-constructivist paradigm of learning and promote a creative and collaborative engagement of learners with digital media content, tools and services in education. Brundrett and Silcock (2002) wrote, "Many have argued for a "social reconstructivist" education (Brehony, 1992, Dewey, 1916, Engelund, 2000 and Jones, 1983), not especially because they see reconstructivist teaching as itself virtuous, but because they think it is the route to a more egalitarian society." (p. 69)With the advent of social interaction software, there will be an expanded access to alternative resources and the real works examples. Teaching and learning have potential to be a continuous life-long process; it is personalized, learner-centered, situated, collaborative, and ubiquitous. Suter, Alexander, and Kaplan (2005) summarized the notion of social interaction software. They see social interaction software "as a tool (for augmenting human social and collaborative abilities), as a medium (for facilitating social connection and information interchange), and as an ecology (for enabling a 'system of people, practices, values, and technologies in a particular local environment')." (p. 48)

There are also a growing number of initiatives and projects directed for K12 education and use of GPS devices in education. Geocaching for instance has been used as an experiential learning activity which is based on constructivist theory (Christy, 2007) to stimulate students to think critically, and provide group collaboration in authentic settings. (Doolittle & Hicks, 2003; Wilson & Rice, 1999).

Social interaction software and handheld devices such as GPS are ideal for distributed learning. Mejias (2006) wrote in response to his teaching and using social interaction software in his classrooms: "Social interaction software allows students to participate in distributed research communities that extend spatially beyond their classroom and school, beyond a particular class session or term, and technologically beyond the tools and resources that the school makes available to the students."

Despite all the concerns and challenges integrating social interaction technologies into the curriculum, there is a growing number of research and support by academics.

For instance, Digital Youth Research [http://digitalyouth.ischool.berkeley.edu/] is a collaborative project that studies number of empirical and theoretical work on youth subcultures, new media, and popular culture. Wesch (2008a) argued the importance of welcoming social media into the classroom as powerful learning tools and wrote: "When students recognize their own importance in helping to shape the future of this increasingly global, interconnected society, the significance problem fades away." (p. 7)

RESEARCH METHODS

Formally presenting this information at the beginning of our project facilitated all participants' ability to fully understand and participate in the smaller group activities that followed. After the formal introduction and group activities, all participants explored a Gallery Walk that was designed for teacher candidates in the US and

teachers in Turkmenistan. Gallery Walk is based on Museum approach to teaching. Gallery Walk for this project was a collection of artifacts (i.e. maps, pictures, posters, audio and video clips) designed to showcase the importance and exemplary usage of geography across content areas. It also provided learning centers for each individual to interact and complete the tasks while interacting in group discussions and writing responses. There were different maps (i.e.Peterson projection) were available for participants to view and explore. The participants wrote their reactions next to these maps and discussed the significance and possibilities for incorporating these maps and technology across curriculum areas.

The next project was designed to provide hands on experience with using GIS and SIS as well as to use new technologies to develop interactive maps and social interaction modules online. Participants and K12 students (ages 11-16) participated in a hiking trip. This outdoor activity was coordinated and organized for an experiential learning activity not only for K-12 students but also for participants. This two and half hour outdoor activity is called Hi5 (Hiking for Health, Happiness, Head, Hand and Heart) to Nature project. K12 students engaged in Geocaching - high-tech treasure hunting game using GPS devices. Teacher candidates in the US and teachers in Turkmenistan participated in the geocaching project with K12 students, developed googleearth.com and communitywalk.com projects, and created interactive maps and online projects of their own.

The third project focused on specific strategies and deconstructing activities which utilize the reading and writing of interactive maps to facilitate adolescents' development of multiple literacies. Participants provided with books related to Art in Geography, Cartography, Environmental Ethics, GPS/GIS in Education and even links to music such as "Follow the drinking gourd" lyrics to this song includes instruction for Underground Railroad.

Participants for the study was identified in interdisciplinary technology courses focusing on Global Positioning System (GPS) Device and Social Interaction Software (SIS) in teacher education program in the US and in a teacher training program in Turkmenistan. There were 13 teacher candidates in the US and 15 teachers in Turkmenistan participated to this study.

This research is based on the participatory study conducted on teaching interdisciplinary literacy and technology courses and investigated 13 (3 male and 10 female) teacher candidates in 5 different subject field (biology, math, art, social studies, and English) and 15 English Language Teachers (2 male and 13 female) who were attending professional development sessions in Turkmenistan. It explored the role of geography and social interaction technologies in teacher education. The research studied the participants' reactions and experiences with new media and technologies as well as their lesson plans that they developed integrating new technologies into the curriculum with limited resources and equipment.

Methodology included analysis of surveys, process papers, questionnaires, electronic journals, reflection papers, responses to online activities, and content analysis of participants' lesson plans and online projects. For our research, we collected all the written responses based on integrating GIS and SIS into their curriculum as well as the lesson projects created by participants.

Our investigation was guided by these questions:

1. What are the participants' personal experiences in integrating social interaction software into their curriculum projects?
2. What perceptions do content area teacher-candidates and teachers have of K12 students' needs and skills after interacting with them during the geocaching experience?
3. How do content area teacher-candidates and teachers envision incorporating social networking software into their teaching practices? How can teacher educators prepare teacher candidates for the 21st century teaching and learning?
4. What common problems and discoveries do the participants share during the process of developing their lessons?
5. What suggestions do participants make in order to improve teaching and learning? How to design effective instruction integra-

ting social interaction software into the curriculum?

We will provide bibliography of recent literature, our presentation; slides online resources shared in our presentation as well as research articles relating to GIS and SIS in education will be made available to all participants on our social networking site.

RESULTS OR EXPECTATIONS

To date, few scholarly studies have investigated the power of Global Positioning System and social interaction software in teacher education. The research participants deconstructed and assessed the national and local curriculum and standards; worked in the hiking trails with k-12 students; presented their curriculum projects such as video documentaries reflecting not only on their stories but also international issues and perspectives through their online contact to global community and documented their stories in order to articulate the realities of conditions in schools through their research, analysis, and dialog. Through the discovery process, the participants explored, designed, and created the strategies, curricula, and programs for improving student outcomes, also the candidates gained alternative point of view on their subject fields and renewed interest and commitment to socially responsible teaching.

Participants argued the challenges and advantages of integrating media production into curriculum; developed skills in deconstructing existing curricula and digital resources and media messages; examined the process of integrating new media as a tool for teaching and learning; integrated the use of media in an instructional context in order to develop global understanding; explored lesson plans, assessment tools, and curriculum guides that incorporate new media and technologies across grades and subjects; experienced how a critical approach to the study of new media combines knowledge, reflection, and action to promote educational equity, and prepares new generation to be socially responsible members of a multicultural, democratic society.

Participants enjoyed working on experiential learning activities and developing interactive projects and also gained media literacy skills. A number of participants said they learned more than the internet technologies. One participant said, "I am happy to have met you, because you have given me much more to think about than just the content of this class." Another one wrote, "More than learning new technologies, this course gave me chance to reflect on my own internet habits and learned something about myself." They found the online activities and the resources engaging and helpful in understanding the role to its unique characteristics.

The participants repeatedly said in their reflection papers how much they were intimidated by the social software but they eventually enjoyed being part of the world community. As one said, "I don't believe what you see on television or read on the Internet. All these statements can be untrue, after recently developing my lesson; I believe anything is visually possible with the help of teachers around the world and fancy equipment."

Participants in addition to creating lesson plans integrating maps and media into the curriculum, they developed internet search skills, focused on deconstructing websites, analyzing wiki entries. By actively involving participants in collecting and analyzing data, taking and uploading pictures and videos, producing media such as interactive maps, wiki pages, blogs and digital stories, they understood the conventions of the medium. As they became the producers of their own media projects, they developed media literacy skills, and became informed consumers and citizen of the world.

We expect to complete our data analysis by January 2010. We also want to develop communication between participants in the US and Turkmenistan to share their experiences and projects.

EDUCATIONAL AND/OR SCIENTIFIC IMPORTANCE

As Palmer (1998) emphasizes that *"They [teachers] are able to weave a complex web of connections among themselves, their subjects, and their students so that students can learn to weave a world for themselves…"* Teachers need to be more interconnected with the new technologies. GPS

and SIS are no longer for the corporation and communication professionals. These software such as ning,google earth are successfully adopted by many, although their use in education is still in its infancy. (HENDRON, 2008, p. 238) From developing digital portfolios (second life) to posting online reflections and journals (wordpress), co-writing books and maps (communitywalk) to co-producing digital stories (voicethread), social software is increasingly being used for educational and lifelong learning environments. SIS provides space for its participants to co-construct meaning using multilingual (Google Translator) and multimedia (slideshare) tools. Participants are bricoleur (LEVI-STRAUSS, 1998) where they are the author as well as the cast, collector, and the director of their projects. Content of their knowledge is co-constructed by the participants.

Today new generation use variety of mediums to communicate and form communities of interest outside "the classroom." There is an obvious disconnect between current educational practices and what the students are exposed to in their daily lives. We encouraged teachers and teacher candidates to integrate new media and technologies into their curriculum units. They outlined the difficulties and unique characteristics of Web based technologies and discussed the power of social interaction software in creating educational learning tools and developing media literacy skills.

We have developed Hi5 (Hiking for Health, Happiness, Head, Hand and Heart) to Nature: Maps and Media project to integrate social interaction software (i.e, wikis, google earth) to foster connectivity among the students, faculty and community. The project focuses on the role of multiliteracies (i.e. numerical, geographical and media literacy) through the lens of multiculturalism; and explores the power of educational media in improving literacy and research skills. Participants deconstructed and assessed the national and local curriculum and standards, gained alternative points of view on environment and renewed interest and commitment to community service.

REFERENCES

BLAU, Andrew. The future of independent media. *Deeper News*, v. 10, n. 1, September, 2004. From: <http://www.bolzcenter.org/dawson/IndependentMedia.pdf>. Retrieved September 8, 2008.

BOYD, Danah. Why youth (heart) social network sites: The role of networked publics in teenage social life. *In*: BUCKINGHAM, David (ed.). Youth, identity, and digital media. Cambridge, MA: MIT Press, 2008. p. 119-142.

BRODA, Herbert W. & BAXTER, Ryan E. Using GIS and GPS technology as an instructional tool. *Social Studies*, v. 94, n. 4, p. 158-160, July/August, 2003.

BRUNDRETT, Mark & SILCOCK, Peter. *Achieving competence, success and excellence in teaching*. New York: Routledge, 2002.

BUGEJA, Michael. The age of distraction: the professor or the processor? *The Futurist*, v. 42, n. 1, p. 66, January/February, 2008.

BURKHARDT, Gina; MONSOUR, Margaret; VALDEZ, Gil; GUNN, Cathy; DAWSON, Matt; LEMKE, Cheryl; COUGHLIN, Ed; THADANI, Vantana & MARTIN, Crystal. enGauge.21st century skills: literacy in the digital age. 2003. From: <http://www.grrec.ky.gov/SLC_grant/engauge21st_Century_Skills.pdf>. Retrieved January 29, 2008.

CHRISTIE, Alice. Using GPS and geocaching engages, empowers & enlightens middle school teachers and students. *Meridian: A Middle School Computer Technologies Journal*, v. 10, n. 1, 2007. From: <http://ncsu.edu/meridian/win2007/gps/index.htm>. Retrieved September 19, 2009.

COLLISON, Chris & PARCELL, Geoff. *Learning to fly:* practical lessons from one of the world's leading knowledge companies. Milford, CT: Capstone Pub, 2001.

DRISCOLL, Margaret. Blended learning: let's get beyond the hype. IBM Global Services, 2002. From: <https://www-07.ibm.com/services/pdf/blended_learning.pdf>. Retrieved December 31, 2008.

DYCK, Brenda. Voice thread: capturing and sharing student Voice with an on-line twist. *Education*

World, October 11, 2007. From website: <http://www.education-world.com/a_tech/columnists/dyck/dyck019.shtml>. Retrieved December 31, 2008.

Eco, Umberto. From Internet to Gutenberg. Lecture conducted at the meeting of The Italian Academy for Advanced Studies in America. 1996, November 12. From: <http://www.italianacademy.columbia.edu/pdfs/lectures/eco_internet_gutenberg.pdf>. Retrieved, February 3, 2008.

Franklin, Tom & van Harmelen, Mark. Web 2.0 for content for learning and teaching in higher education. May, 2007. From: <http://ie-repository.jisc.ac.uk/148/1/web2-content-learning-and-teaching.pdf>. Retrieved February 3, 2008.

Freire, Paulo. *Pedagogy of the oppressed*. New York: Continuum, 2002.

Gould, Eric. *The university in a corporate culture*. New Haven: Yale University Press, 2003.

Haythornthwaite, Caroline. Online personal networks: size, composition and media use among distance learners. *New Media and Society*, v. 2, n. 2, p. 195-226, 2000.

Hendron, John G. *RSS for educators:* blogs, newsfeeds, podcasts, and wikis in the classroom. Washington, DC: International Society for Technology in Education, 2008.

International Society for Technology in Education. National educational technology standards for students: The next generation. *Iste*, 2007. From: <http://www.beva.org/publish/week1/NETS_for_Students.pdf>. Retrieved January 18, 2008.

Ito, Mizuko; Horst, H.; Bittanti, Matteo; Boyd, Danah; Herr-Stephenson, Becky; Lange, Patricia G.; Pascoe, C. J. & Robinson, Laura. Living and learning with new media: summary of findings from the Digital Youth Project. Chicago: The MacArthur Foundation. 2008. From: <http://www.macfound.org/atf/cf/%7BB0386CE3-8B29-4162-8098-E466FB856794%7D/DML_ETHNOG_WHITEPAPER.PDF>. Retrieved December 31, 2008.

Jenkins, Henry. Confronting the challenges of participatory culture: Media education for the 21st century (part one). *The Official Blog of Henry Jenkins*, October 20, 2006. From: <http://www.henryjenkins.org/2006/10/confronting_the_challenges_of.html>. Retrieved March 20, 2008.

Jenkins, Henry; Purushotma, Ravi; Clinton, Katherine; Weigel, Margaret & Robison, Alice J. *Confronting the challenges of participatory culture:* media education for the 21st century. Chicago: The MacArthur Foundation, 2006. From: <http://www.projectnml.org/files/working/NMLWhitePaper.pdf>. Retrieved February 2, 2008.

Kahn, Richard & Kelner, Douglas. Paulo Freire and Ivan Illich: Technology, politics and the reconstruction of education. *Policy Futures in Education*, v. 5, n. 4, p. 431-448, 2007.

Lary, Lynn M. Hide and seek: GPS and geocaching in the classroom. *Learning and Leading with Technology*, v. 31, n. 6, p. 14-18, 2004.

Lenhart, Amanda; Madden, Mary; Smith, Aaron & MacGill, Alexandra. Teens and social media. *Pew Internet and American Life Project*, December 19, 2007. From: <http://www.pewinternet.org/pdfs/PIP_Teens_Social_Media_Final.pdf>. Retrieved March 31, 2008.

Lévi-Strauss, Claude. *The savage mind*. London: Weidenfeld & Nicolson, 1998.

Lieberman, Gerald A. & Hoody, Linda L. *Closing the achievement gap:* using the environment as an integrating context for learning. San Diego, CA: State Education and Environment Roundtable, 1998.

Matherson, Lisa; Wright, Vivian W.; Inman, Christopher T. & Wilson, Elizabeth K. Get up, get out with geocaching: engaging technology for the social studies classroom. *Social Studies Research & Practice*, v. 3, n. 3, November, 2008.

Masterman, Len. *Teaching the media*. New York: Routledge, 1990.

Mejias, Ulises. Teaching social software with social software. *Journal of Online Education*, v. 2, n. 5, June/July, 2006.

Noon, Doug. Democracy 2.0. *Borderland*, June 14, 2007. From: <http://borderland.northernattitude.org/2007/06/14/democracy-20>. Retrieved December 20, 2007.

OBLINGER, Diana D. & OBLINGER, James L. *Educating the net generation*. Boulder, CO: Educause, 2005.

OLDENBURG, Ray. *The great good place:* cafes, coffee shops, bookstores, bars, hair salons and other hangouts at the heart of a community. 2. ed. New York: Marlowe& Company, 1999.

OWEN, Martin; GRANT, Lyndsay; SAYERS, Steve & FACER, Keri. Social software and learning. *Futurelab*, July, 2006. From: <http://archive.futurelab.org.uk/resources/publications-reports-articles/opening-education-reports/Opening-Education-Report199>. Accessed on: January 14, 2008.

PALMER, Parker J. *The courage to teach:* exploring the inner landscape of a teacher's life. San Francisco, Calif: Jossey-Bass, 1998.

PARTNERSHIP FOR 21ST CENTURY SKILLS. Framework for 21st century learning. Washington, DC, July 23, 2007. From: <http://www.p21.org/index.php?option=com_content&task=view&id=254&Itemid=120>. Retrieved February 8, 2008.

PRENSKY, Marc. Search *vs*. research. Or, the fear of The Wikipedia overcome by new understanding for a digital era. *Home page Prensky*, 2005, From: <http://www.marcprensky.com/writing/Prensky-Search_vs_Research-01.pdf>. Retrieved March 20, 2008.

RHEINGOLD, Howard. Writing, reading, and social media literacy. *Harvard Business Publishing*, October, 2008. From: <http://discussionleader. hbsp.com/now-new-next/2008/10/the-importance -of-social-media.html>. Retrieved December 31, 2008.

RICE, Margaret L. & WILSON, Elizabeth K. How technology aids constructivism in the social studies classroom. *The Social Studies*, v. 90, n. 1, p. 28-33, January/February, 1999.

RICHARDSON, Will. Blogs, wikis, podcasts and other powerful web tools for classrooms. Thousand Oaks, CA: Corwin Press, 2006.

SCHLATTER, Barbara E. & HURD, Amy R. Geocaching: 21st century hide and seek. *Journal of Physical Education, Recreation, & Dance*, v. 76, n. 7, p. 28-32, September, 2005.

SHAUNESSY, Elizabeth & PAGE, Carrie. Promoting inquiry in the gifted classroom through GPS and GIS technologies. *Gifted Child Today*, v. 29, n. 4, p. 42-53, Fall, 2006.

SRI INTERNATIONAL CENTER FOR TECHNOLOGY IN LEARNING. Learning ecosystem. *School 2.0*, 2007. From Website: <http://etoolkit.org/etoolkit/>. Retrieved April 4, 2008.

SRINIVASAN, Ramesh. Where information society and community voice intersect. *The Information Society*, v. 22, n. 5, p. 355-365, 2006.

SOUKUP, Charles. Computer-mediated communication as a virtual third place: building Oldenburg's great good places on the World Wide Web. *New Media & Society*, v. 8, n. 3, p. 421-440, June, 2006. [On-line: <http://nms.sagepub.com/cgi/content/abstract/8/3/421>.]

STIMSON, Bob. An Educator's Manifesto! Arise! You have nothing to lose but your chains! *Classroom 2.0*, October, 2007. From: <http://www.classroom20.com/forum/topics/649749:Topic:56987>. Retrieved December 31, 2008.

SUTER, Vicki; ALEXANDER, Bryan & KAPLAN, Pascal. Social software and the future of conferences – right now. *Educause Review*, v. 40, n. 1, p. 46-59, January/February, 2005.

THE NEW LONDON GROUP. A pedagogy of multiliteracies: designing social futures. *In*: COPE, Bill & KALANTZIS, Mary (eds.). *Multiliteracies:* literacy learning and the design of social futures. London: Routledge, 2000.

TUCKER, Patrick. The over-mediated world: according to a media expert, technology creates its own value systems (Society). *The Futurist*, v. 41, n. 1, p. 12-13, January-February, 2007.

UNSWORTH, Len. Multiliteracies, e-literature and English teaching. *Language and Education: International Journal*, v. 22, n. 1, p. 62-75, 2008.

VIRTUALABILITY. Virtual ability our people. *Virtual Ability, Inc*., 2008. From Website: <http://virtualability.org/ourpeople.aspx>. Retrieved December 31, 2008.

WESCH, Michael. Anti-teaching: confronting the crisis of significance. *Education Canada*, v. 48, n. 2, p. 4-7, 2008a.

_____. A vision of students today (& What teachers must do). *Encyclopædia Britannica Blog*, October 21. 2008b. From: <http://www.britannica. com/blogs/2008/10/a-vision-of-students-today-what-teachers-must-do/>. Retrieved December 31, 2008.