Guest Editorial: On Technology and English Education

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Abstract

This paper surveys recent trends and issues related to the integration of newer technologies in K-16 English language arts/literacy learning classrooms. The author argues that newer technologies are used too often in English courses as a tool to learn traditional skills and materials, and not often enough for the transformation of individuals and communities. The author suggests that identifying agents that act as inhibitors to such potentially generative outcomes for technology integration is a necessary first step, and then articulates a wide range of questions that the field might address.

"In acquiring new productive forces men [sic] change their mode of production, and in changing their mode of production they change their way of living—they change all their social relations."

Karl Marx

"[Bringing technology to education] is a slow, but steady revolution. Each decision by a school board, each act of support by a principal, and each initiative by a teacher is changing the nature of schools."

Howard Mehlinger

English Education and the Annual SITE Conference

In an era of greatly reduced financial support for professional travel, faculty members face difficult choices when attempting to identify only one or two conferences to attend each year. English educators who have yet to experience the exhilaration of a Society for Information Technology and Teacher Education (SITE) conference might question whether they would be better served to reserve their limited travel funds for a conference intended specifically for English language arts/literacy educators. For reasons I describe below, I would argue that the SITE conference offers English educators unique professional development opportunities, and the times in which we now practice have created exigencies that make attendance at the annual SITE conference particularly compelling.

In this essay, after briefly describing what I understand to be a primary benefit of attending SITE, I outline several of the concerns and interests that I share with colleagues. These concerns and interests reside at the intersections of newer technologies and the English language arts and literacy learning and practices not only of students and teachers, but also of members of communities in which they currently reside and of those in communities they may wish to join in the future.

By submitting proposals to share our research and critical thinking about these crossroads with one another, we are all invited to become cartographers and storytellers, builders and dreamers, evaluators and visionaries. We are invited to use our reading, research, close observation, and personal experience not only to chart for one another what we have clearly seen, but also to elucidate the possibilities and perils that are more difficult to exhume and examine. As we do so, we are reminded that those from outside our profession (as well as many from within) are feeling the pinch of strained economies (of various sorts) and are looking to us for clear, compelling, and convincing evidence that further investment in newer technologies will bear dividends. Those of us on the SITE Teacher Education Council invite you to submit a proposal to present at a SITE conference and to help us build learning communities and opportunities in which increasing numbers of our students are able to construct lives of purpose and satisfaction and contribute to the development of sustainable communities of prosperity and respect.

SITE as an "Enabling Community" With "Binocular" Vision

Why choose to attend the SITE conference? In his text, *The Culture of Education*, Jerome Bruner (1996) describes "enabling communities" as composed of colleagues who help us deal with the impermanence and instability of our broader culture and, in particular, of our profession (p. 79). Although few outside of our profession would challenge the notion that we are living in an era of rapid cultural change, more are apt to challenge the notion that educators are experiencing a comparable rate of professional change. For instance, in considering the rate of adoption and integration of newer technologies into educational settings, Former U.S. Secretary of Education Rod Paige (2002) observed that

...education is the only business still debating the usefulness of technology. Schools remain unchanged for the most part despite numerous reforms and increased investments in computers and networks. The way we organize schools and provide instruction is essentially the same as it was when our Founding Fathers went to school. Put another way, we still educate our students based on an agricultural timetable, in an industrial setting, but tell students they live in a digital age. (cover letter)

Whether we agree with Paige or not, few English educators in the U.S., or elsewhere, would take issue with the premise that as a professional community we have yet to make use of newer technologies in ways that do more than suggest the possibilities that these technologies might offer teachers and students; local, national, and international communities. If our current situation is to change, it will rely, at least in part, on our ability to identify, analyze, and address our own inhibitions, as well as those of the broader community, as these relate to various technologies and literacy learning.

Identification of these inhibitors may occur more readily in the type of enabling community that SITE has the potential to offer. Those who attend SITE are familiar with, and most have used a wide array of newer technologies, with a wide array of students, for an equally wide array o f purposes. This international conference attracts not only attendees with some familiarity with newer technologies, but these teachers come to the conference from geographically, politically, culturally, economically, and racially distinct communities, and from a variety of disciplines and professions. Even as we have, they have dealt with the evolution of hardware and software, of expectations and disappointments, the impermanence and instability of working as a teacher educator interested in the implications of various technologies for their work. As such, they can certainly serve us well as an enabling community sharing our sojourn, a welcome respite from an often bumpy, pot-filled road. They can also offer something more difficult to come by at a conference intended for those who share a discipline: reciprocity between disciplines.

SITE identifies itself as an international and interdisciplinary conference, but it also has the potential to serve a transdisciplinary function. Not only may English educators have the opportunity to learn what is common, mutual, and reciprocal among and between teacher educators from various disciplines, they also have the opportunity to change practice, to be converted to new ways of considering the implications of technolo gy, to transfer concepts related to intersections between newer technologies and newer modes, purposes, and situations for composing as these are occurring in disciplines other than our own.

Bateson asks us, "What bonus or increment of knowing follows from combining information from two or more sources" and then answers his own question by turning our attention to vision (1979, p.77). He reminds us that it is at the fringes or boundaries of one, it is at the borders that are created when divergent bodies meet, that our vision is clearest—that contrast clarifies and makes patterns easier to discern. What boundaries, real or imagined, separate the work of English teacher educators from social studies teacher educators? And what boundaries separate the interests and concerns of instructional technology faculty members from our own?

As both Bateson (1979) and Merleau-Ponty (1968) remind us, monocular vision (vision from only a single eye and perspective) provides a two -dimensional envisioning of our landscape and horizon, but a second eye working in tandem with the first, rather than blurring our perception, adds a third dimension—depth. As we join other teacher educators, instructional technologists, and educational policy makers at SITE in a critical examination of our common and uncommon objectives, what benefits might accrue from our curricular ambitions through, between, and around our various disciplines and nationalities? What questions might science, math or social studies educators ask of our research that will more clearly identify boundaries for us? And what questions might we ask of them that will serve similar purposes? What insights might instructional technology faculty offer that may enable a finer and more eloquent honoring of the historic role and responsibilities of English educators even as they serve to motivate us to distance ourselves from these roles in order to see them more clearly? What benefits

might we experience in responding to challenges from English education colleagues who work in different countries and cultures? And how might English education research underway in this country influence their understandings? What trends and issues are appearing with greater frequency in our field's research and literature, and what light might these trends and issues offer for re-envisioning our own work?

Trends and Issues at the Intersections of Newer Technologies and English Education

Given our charge to prepare pre-service teachers and engage in-service teachers in critical studies of the attitudes, beliefs, skills, and knowledge associated with critical literacy learning and practices, what new technologies are we introducing into our methods courses and the professional development opportunities that we offer to in-service teachers? With resources (time, energy, money, space) that are often finite, what have we sacrificed in order to introduce these technologies? In what ways do these newer technologies compromise or improve our, and our students', literacy practices? In what ways are we assured that the costs (broadly conceived) of these newer technologies are justifiable? What measures do we take to ensure a critical analysis of the affordances and limitations of these technologies? What new issues are we confronting as a result of the introduction of these technologies? How have newer technologies changed the contexts for learning, learner and/or the broader community?

Andrew Feenberg (2003) and Bob Yagelski (2005), among others, have warned educators not to conflate the adoption of newer technologies with "Progress." In other words, both men caution us not to view the integration of newer technologies into our teaching as scaffolding innately and universally desirable outcomes—*or as determinist*. The development of new technologies and the decision to integrate them into our teaching and learning lives is neither a foregone conclusion nor following a predetermined trajectory. We, individually and collectively, have the capacity and, if we consider ourselves professionals, the responsibility to influence the development, modification, adoption, and/or rejection of newer technologies. In order to make these critical decisions, we will need to understand not only how to use these technologies, but also the affordances (possibilities), constraints (limitations), and costs their adoption and integration into our teaching have the potential to create for us, our students, and the broader community.

Attempting to create a compendium of "newer technologies"[1] on which we need additional research would likely result in a lengthy, contested, and immediately dated list. Such a list would include a wide range of instruments, applications, processes, and (virtual) places, each with the capacity to change our thinking about such things as reading, writing, communication, education, art, communities, democracies, and globalization.

Such a list would likely include such items as laptop, desktop, tablet, and handheld computers and peripherals (printers, DVDs, CDs, jump drives, Web cameras, etc.); other hardware that captures or reads digital information (digital cameras, camcorders, MP3 players, digital voice recorders, scanners, PDAs, cell phones, game systems, etc.); specialized software programs; suites of software programs that permit the seamless integration of word processing, databases, spreadsheets, presentations, calendars, "to do" lists and address lists; means of accessing and posting to the Internet (dial-up, broadband, WIFI, servers); methods of research, interaction, and publication made possible by the Internet (Podcasts; RSS feeds; search engines; video conferencing; VoIP; e-mail and listservs; personal and professional Web sites; online national, state and local libraries and museum collections; various dictionaries, encyclopedias and wikis, etc.);

and a bevy of newer genres (digital storytelling and other multimodal compositions, hypertext, zines, blogs, Web sites, weblogs, podcasts, and wikis, for instance). These newer technologies have also introduced or increased our interest and concern about a range of such issues as intellectual freedom, copyright, civic engagement, social engineering, and equity.

Though the specification of hardware, software, genres, and issues that have the capacity to influence "best practice" in the teaching of the English language arts and thus require additional research might be hotly contested, the notion that we need to make forays into this area is not. Perhaps the world once turned to professional studios such as Warner Brothers, Metro Golden Mayer, and Universal Studios for movies, but today, some elementary school students can use Macintosh computers and software programs such as iMovie, iTunes and Garage Band to create their own movies with original sound tracks.

High school students once communicated with those outside the school walls by using the counselor's phone, the postal service, or face-to-face visits. Today, students send e-mails, participate on listservs and blogs, text message, videoconference, podcast, and use their cell phones.

In only the recent past, middle school students relied on newspapers, magazines, and television news shows for information on major current events. Today, they surf the web and follow news reports from other countries, contact those who were witnesses to world events by e-mail or videoconference, and collaborate with peers in other countries to create websites, blogs and wikis to publish their learning.

In what ways are we using newer technologies as tools to facilitate the learning of more traditional skills and material? In what ways are we introducing students to the semiotic systems embedded in visual and aural texts? What new audiences, genres, purposes and situations have we identified for students who are composing with new media? What learning occurs and why/how is it preferable to the learning available without these technologies? What new skills, knowledge, beliefs and/or attitudes seem to benefit new English teachers? What new collaborations are developing? To what end(s)?

These newer technologies are far more than "tools," and those who consider them primarily as the means to faster, easier, more comprehensive learning miss the point. Newer technologies may be capable of racheting up our rate or expression of learning (learning to read, neatening and spell-checking essays, learning times tables, studying geography), but, more importantly, they allow us and our students: (1) to communicate with new semiotic systems (using symbols other than or in addition to the familiar alpha-numeric symbols used to "make meaning") and semiotic systems previously unavailable to most individuals (film-making and photo-editing, for instance); (2) to communicate using new (or previously unavailable to the mass public) modes, media, and means for new audiences and for new purposes; and, (3) to identify new sites for our own and our students' learning.

How important is it for our students to learn how color, sound, animation, music, and graphics combine with alphanumeric symbols to communicate? To consider affect and ethics in communicatio n? To produce as well as consume information found on the Internet? Are these educational frills or—like the robin, the harbinger of a new season—a new period in which our communication choices will have grown exponentially? If we acknowledge these new semiotic systems, publication genres, and sites for self-sponsored learning as important to our students, who bears primary responsibility for their

teaching? The English teacher? The art teacher? The instructional technology teacher? All or none of these?

Does the English teacher need to collaborate with colleagues to coordinate instruction in, with or through newer technologies? If English educators rationalize that development of Web sites or slides is simply a new way of composing and communicating understandings, will they also assume responsibility for studying personal space as a culturally determined construct with relevance for a Web site that seeks an international audience? When we look at the networking of computers within the building and filters that limit access to Web sites beyond the building as influencing the opportunities our students experience during their interactions with newer technologies, in what ways will we invite the computer or instructional technology teacher to collaborate?

"Teaching is a political act." We've heard, and perhaps said that, ourselves. How are newer technologies affecting political, economic and cultural systems? How might they? In what ways might newer technologies contribute to a more sustainable and just world? How might newer technologies influence our students' future employability? How might newer technologies influence their ability to construct lives that they find satisfying? How might newer technologies contribute to civic engagement and the betterment of communities?

The United States has reveled in and benefited from its status as the world's oldest democracy, but how is it possible for a democracy to survive if the majority of the nation's citizens are unable to resist the "siren song" of artful combinations of music, animation, and digitally altered photographs? What happens in a nation whose citizens are unable to critically interrogate the platforms and promises of parties and candidates; are unable to cipher ideologies from visual and aural idioms? Can we claim that a nation functions as a democracy if a substantial number of voters make decisions based on whether they prefer the music of Bruce Springsteen to that of Brooks and Dunn? Clearly, the ability to think critically about the leadership skills and platforms of candidates has always required an ability to read fluently and critically; today it requires a broader set of critical literacies.

It is not only political systems that are at stake, however. For more than a decade, we have heard that we have come to the end of the Industrial Age in the countries whose economies are among the strongest in the world. The cost of living and requisite wage expectations in these nations have created a situation in which they are unable to price goods competitively. If futurists are correct, and we have no reason to believe otherwise, and we are entering an era in which those whose economies will remain strong will be those capable of marketing ideas and communication systems, technologies, and analyses nationally and internationally, our students need ample opportunity to create, consume, dissect, and analyze communicators, communications, and communication systems and contexts. The U.S. Presidential Committee on Information Literacy (1989), for instance, puts it this way: "Now knowledge—not minerals or agricultural products or manufactured goods—is this country's most precious commodity, and people who are information literate—who know how to acquire knowledge and use it—are America's most valuable resources" ("Conclusion," p. 2).

Where will learning occur in the remainder of the 21st century? Will newer technologies fundamentally change the preparation and relationship between teacher and student? Will newer technologies increase or decrease traditional reading and writing skills? Will they increase or decrease motivation for learning? Are they more apt to contribute to world peace or world revolution? Will they be capable of disrupting the hegemonic influence of post-secondary educational institutions?

These newer technologies have also already created new sites for teacher and student learning. We were amazed at the ability of our students to master geography as they played Where in the World Is Carmen Sandiego? (Broderband, 1995) decades ago. Today, students have a far wider array of "spaces" in which they can participate as active learners. These include, for instance, online and hybrid courses offered by individuals, schools, educational consortia, universities and bookstores; Web sites, wikis, and blogs created by professionals in various fields as well as by enthusiasts and other students; and a growing array of games—some focused on the memorization of data, some on the least wholesome attributes we could imagine demonstrating for our youth, some on sports, and some on students' integration into persistent alternate worlds such as the Sims (Electronic Arts, Inc., 2005), where they assume alternative personalities, address new challenges, and receive new rewards. National boundaries begin to blur as students inhabiting these alternative game worlds often find themselves playing with students from other countries.

However, such valorization of technology distorts its influence—not only in education, but also in our lives. Many have suffered the annoyance of sitting on a plane, riding on an escalator, or being in another public place next to a person engaged in an extended cell phone conversation, or we have experienced the oppression of an extended workday resulting from omnipresent e-mail and computers that serve as visual reminders of work that has yet to be accomplished. Many have also experienced the well-planned lesson that goes awry when the Internet goes down or the hardware simply will not work. However, newer technologies' potential liabilities are far more pernicious than these examples suggest. Newer technologies, for instance, have the capacity to exacerbate divisions that already exist.

In the U.S., for instance, the digital divide (access to newer technologies and to Internet services) generally follows class and racial lines, contributing to widening gulfs within this country. It is reasonable to assume that, if unremediated, such disparities and their consequences may exacerbate existing social, political and economic tensions and thus contribute to growing civil unrest. Barbara Monroe (2005) invites us to consider, however, the way that using the term "digital divide" creates a false sense of comfort for us. As long as we name the challenge we face as "a digital divide" we can readily imagine a remedy—more taxes and more resources to even the playing field (and that would be gratefully accepted and acknowledged by teachers in underfunded districts). Such discourse choices, however, allow those in the U.S. to avoid an alternative naming— "institutionalized racism and classism." The shortage of computers and other new technologies in low-income rural and urban school classrooms is only one way in which those schools and children are cheated by a nation willing to accept disparately funded schools and unequal opportunities for children as a "natural state."

Too few computers are not the only challenge faced by U.S. schools that serve many students of color. Ilona Snyder, for instance, predicts that although we will see an explosion of forms and genres for communicating as we continue to develop new technologies, alphabetic texts will remain the privileged discourse in the academy (2002). Snyder worries that as teachers dedicate increasing amounts of class time toward learning newer technologies; in an effort to empower their students by providing them with a voice and venue for transforming their communities, they will shortchange instruction in the dominant discourse—a decision with potentially disastrous results for students with a desire to pursue postsecondary study.

What new teacher professional development settings, methods and materials will enable in-service teachers the time and support that they need to critically evaluate the cost/benefit ratio of various new technologies? What innovative ways have we found to

fund research projects the profession considers generative? How can we justify the costs of newer technologies with the dearth of compelling evidence that the benefits outweigh the costs?

Even well-funded U.S. schools face challenges. Many have noted that a "didactic divide" (a lack of high quality teacher professional development that foregrounds critical analyses of newer technologies) is pervasive in many U.S. school districts. Such professional development might help teachers to address what has remained a gender divide as well, as young women continue to show less interest in newer technologies than to their male peers (Littleton, Karen & Hoyles, Celia, 2002). Until teachers have ample opportunity to consider the critical implications of these newer technologies for teaching and learning, for communicating in new genres and for new audiences, they will be unable to use these technologies in more than a utilitarian fashion.

We have not yet identified methods, materials, or approaches to teacher professional development that adequately address the constraints in-service teachers face— particularly, shortages of time and equipment for their own use and for their students to use and demands that they provide evidence of a curriculum whose intent seems to be to produce a generation of "standardized" students in nations, such as the U.S., that have historically celebrated individuality. We will be challenged to make these discoveries in an era in which, with increasing frequency, research dollars are allocated to large-scale, narrowly focused, scientifically based projects. The boldness, innovation, and risk-taking that many feel made the United States great have been sent to the back of the bus.

Far more affordances, limitations, and costs are associated with newer technologies than the few that are described here. One might reasonably ask whether the U.S. Congress, state legislatures, and local school boards should allocate increasing percentages of their funding to newer technologies and related professional development for teachers when there is so much we have yet to determine. Jim Porter (2005), among others, warns us not to adopt a dismissive attitude toward these newer technologies—technologies that clearly have already changed our lives.

In 3 years of studies by the National Commission on Writing (NCW), educators (*The Neglected R: The Need for a Writing Revolution*; NCW, 2003), representatives from business and industry (*Writing: A Ticket to Work...Or a Ticket Out: A Survey of Business Leaders*; NCW, 2004), and state governments (*Writing: A Powerful Message from State Government*; NCW, 2005) have validated the changes that newer technologies have made in their communicative practices in workplace settings. Others, such as Grabill and Hicks (2005), Cushman (1998), and Morrell (2005), have emphasized the ways through which newer technologies might serve to eliminate the walls that separate students from meaningful civic engagement.

Neil Postman (1996) challenged educators to consider our ultimate ambitions for education and warned us that our inability to explain these ambitions to the public in a way they found clear and compelling could well result in an end to support for public education. Today, we can debate whether we still have public support and whether current standardized tests and a business model approach to schooling that exhorts educators to "measure so you can manage" education is a "clear and compelling" representation of our beliefs about the authentic pursuit of knowledge and understanding.

Today, we find ourselves once again at another critical juncture as we consider how we will define, study, analyze, measure, integrate, and assess the affordances and limitations of newer technologies for our educational endeavors. We can use newer technologies as

tools to help our students learn in an otherwise traditional manner; we can use newer technologies to try to cut the costs of education; we can use newer technologies to develop more measurements of student learning (and not learning); we can use newer technologies to manage the burgeoning amounts of information being produced every minute of every day. Or, we can look to technology for something more; we can consider how newer technologies might support not only our quest for a sustainable ecosystem, but our desire to contribute—and to motivate others to contribute—to such an undertaking.

We can consider how newer technologies might be used in classrooms to scaffold generations of world citizens who do not only tolerate, but celebrate diversity and practice justice. We could attempt to imagine how we might use newer technologies to reunite what seem to be increasingly fragmented individuals, families, and communities. We should not conflate the development and integration of newer technologies into our teaching as a sign of progress or as following an immutable, predetermined trajectory. These new methods of making meaning and communicating meaning have great potential, but it is only potential until we humans interact with it. Although I do not share Postman's aversion to technology, I find his admonition to us to consider carefully the most serious challenges we face, the roots of those challenges, a well-founded suggestion:

The computer argues, to put it baldly, that the most serious problems confronting us at both personal and professional levels require technical solutions through fast access to information otherwise unavailable. I would argue that this is, on the face of it, nonsense. Our most serious problems are not technical, nor do they arise from inadequate information. If a nuclear catastrophe occurs, it shall not be because of inadequate information. Where people are dying of starvation, it does not occur because of inadequate information. If families break up, children are mistreated, crime terrorizes a city, education is impotent, it does not happen because of inadequate information. Mathematical equations, instantaneous communication, and vast quantities of information have nothing whatever to do with any of these problems. And the computer is useless in addressing them. (Postman, 1993, p. 119)

Postman, intentionally or not, embeds one use of synecdoche in another and trips on his own trope. Not only is a "computer" charged with representing all newer technologies, but information management becomes the placeholder for all current and potential computer uses. Perhaps the world's ills are not caused by a lack of information, but relegating all uses of computers to information management is a useless proposition.

As we develop progressively fuller understandings of the capacity of these newer technologies to unify us or divide us, to serve or enslave us, to remedy or create injustices, to enable or disable human potential, to empower or disempower the historically disenfranchised, to sustain or destroy our environment and cultures, it will also be important to keep in mind the limits of various technologies' capacities. And, in this process, we cannot separate the "dancer" from the "dance." Even as we study these technologies, it will be important to study the human-technology interaction, to ponder the existence and nature of the relationships between the individual, institution, culture, and these newer technologies.

Endnotes

[1]The Encarta® World English Dictionary (1999 Microsoft Corporation) defines "technology" as "the study, development, and application of devices, machines, and techniques for manufacturing and productive processes." In the U.S., technology has been equated with innovation and progress.

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