Transforming English Language Arts in a Web 2.0 World

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In California a group of middle school youth attend an after-school program whose centerpiece is Web 2.0 technologies. Creating digital music and digital stories, as well as t-shirts, logos, greeting cards, and drawings, these youth exchange multiple, inventive creative products with youth in South Africa and India via a private social networking site called space2cre8. Through blogs, wall postings, emails, and photos, they represent themselves, their friends, families, school, and communities, taking tentative steps toward imagining and connecting with kids who are physically, linguistically, and culturally on the other side of the world. An Oakland, California, boy named De’Von posted a photo of himself accompanied by a blog called “hello world”: “ive finally got a pic and im online and anybody on the cre8 hit up mr. man of the year [his profile name] ya dig.” “My three wishes are: I want to take all my cousins to Great America. I want to be an astronaut. I want my mom to get the job she is interviewing for today.” Kassandra’s blog posting followed, and subtly indexed, a group discussion of a digital story by a girl in India, in which was paired a photograph of an outdoor cooking pot with a voiceover that “we don’t have a proper kitchen.”

Youth in South Africa viewed this story too, and one boy summarized the effect of its depiction of Bakhti’s economic circumstances in India, in juxtaposition to the constraints experienced in his own village, simply but eloquently: “It moved me.” De’Von back in California observed about the young Indian author: “I think she’s a person who will be blessed along the road.” To be sure, not all of the communicative exchanges among this digitally connected group of young people proceeded so smoothly or resulted automatically in shared or hospitable understandings. A South African youth found himself pondering how to respond to a forthright query from an Indian girl about his decision to use as his profile picture, not his own photograph, but an Internet image of the rap artist Lil’ Wayne. This girl did not share his sense of aesthetics or appropriateness or his engagement in American-origin popular culture: “Hello Kelvin, I am Maya. You don’t have a picture of yourself? Why do you use this photo. I don’t like your profile picture. Please use your photo.” Kelvin’s considered response turned out to be much delayed, however, due to frequent Internet problems at his school, which provided his only access to computers or Web-based tools, and had in fact been technologically outfitted for the first time only in the past year.

As a Web 2.0 tool, this social networking site, like many others, has the potential to mediate a range of different “language arts” literacy practices. These practices include cross-cultural, cross-geographic, cross-linguistic exchanges; the making and sharing of meanings and knowledge through multiple modes; the representation of self, to not only friends and acquaintances, but also to imagined others and audiences afar; the exploration and negotiation of a wealth of textual and platform affordances and constraints; exposure to and interaction with divergent and sometimes vastly different lifeworlds; the creation of additional and alternative social spaces and the intersection and interweaving of online and offline experience; and the reversal of “polarities of interpretation” (Silverstone, 2007), whereby persons who are accustomed only to being interpreted get their turn at the wheel. With such practices and their affordances come considerable challenges, including a still inequitable distribution of tools, resources, and capital, and at this historical moment, a mismatch between them and the ideologies, goals, and participant structures of schooling.

It is widely agreed that Web 2.0 technologies, and related literate, semiotic, and social practices, have transformative potential for communication, identity formation, and knowledge construction in our global world. We see that potential played out daily in the informal digital practices of youth evident in the space2cre8 intercontinental exchanges. Yet, the question that remains is whether educational institutions should, can, and will follow suit. It is not inconsequential that the space2cre8 project described above takes place in U.S. contexts during out-of-school time rather than during the school day, where traditional—uni-modal, non-digital,
Redefining Learning in ELA Classrooms Through Uses of Web 2.0 Tools

We signal the importance of moving beyond a framing of Web 2.0 tools as simply a matter of “learning technologies” or “digital literacies” to a conceptualization of these tools as harbingers and prime movers in fundamentally different patterns of knowledge construction, communication, and identity formation, and hopefully in teaching too, via mediated participation in the global community (Knobel & Lankshear, 2008; Leu, O’Byrne, Zawilinski, McVerry, & Everett-Cacopardo, 2009). The most desirable and most helpful relationship between quickly evolving mediational tools and more conventional understandings of literacy is helpfully identified four stances toward this relationship: “resistance” to new literacies, “replacement” of old literacies with new, using new literacies to validate or “return” to the old, and “remediation” in which new media alongside old forms are assessed according to their affordances for expression and learning. Leander further advocates a “parallel pedagogy” in which print literacies exist side-by-side, and are considered comparatively to, uses of Web 2.0 tools—for instance, print-based memories in Leander’s course for pre-service teachers are explored for their affordances in juxtaposition to digital stories (see below).

In this chapter, we propose a transformation of ELA around two basic ideas—that uses of Web 2.0 tools are redefining what it means to construct knowledge, and that students are using Web 2.0 tools to explore and enact alternative identities. Web 2.0 tools have transformed knowledge construction from a system of top-down, vetted control of knowledge as reflected in the Encyclopedia Britannica or academic journal dissemination to one of bottom-up collaborative, social construction of knowledge mediated by links as reflected in Wikipedia (Weinberger, 2007). Knowledge is also represented in highly multimodal ways through images, videos, digital mapping, etc. (Hull & Nelson, 2005).

In the latter, knowledge construction becomes transparent through documentation of vetting, voicing of alternative perspectives, rules of evidence, and related links. Students therefore can acquire not simply information, but can also experience the modeling of meta-knowledge or heuristics for constructing their own understandings. This involves a major shift from passive consumption to active, shared construction of knowledge—from top-down, vertical acquisition of information—learning that, to horizontal learning how, as well as from acquiescing to knowledge authorities to collective construction and judgments about the credibility of knowledge through networked “many-to-multitudes” interaction (Davidson & Goldberg, 2009, pp. 27–35). Web 2.0 tools mediate this collaborative, social construction of knowledge through sharing of links, RSS feeds, tags, as well as collaboration tools such as wikis, social networking sites, or Google Docs., etc., so that connections build on connections (Donath & boyd, 2004).

Such online sharing leads to our second focus: the construction of online identities within specific social communities or “participatory cultures” (Greenhow, Robelia, & Hughes, 2009; Jenkins, 2009). Research on how youth in the United States use digital tools in their everyday lives outside of school suggests that they construct their identities as active members of online communities through “hanging out” with peers, “messing around” by experimenting with online uses such as the writing fanfiction (Ito et al., 2009). According to boyd (2009, p. 9), engagement in these “networked publics” are constituted by “persistence” (communication is recorded and stored); “searchability” (people can readily locate each other and information); “replicability” (material can be copied and moved); and “invisible audiences” (it is difficult to identify one’s potential viewers or readers). Because they are no longer limited by physical proximity in local face-to-face community interactions defined by race, gender, class, age, or language markers (Davies & Merchant, 2009), youth can experiment with constructing alternative, “projective identities” (Gee, 2007) through, for example, creating avatars and employing different language styles (Kafai, Peppler, & Chapman, 2009; Thomas, 2007).

They also can experience a sense of agency through the sharing of their expertise as part of situated knowledge construction (Gee, 2007). For example, given that 31% of adolescents play games on a daily basis, and 76% play games with others, they share knowledge of game cheat
strategies, enhancing their sense of agency as contributing to a community (Lenhart et al., 2008).

Other examples of youthful agency derive from the experience of attracting viewers (sometimes in the thousands) to online video or photo-shares (Willet, 2009) or experiencing the influence of their postings on participants in social networking sites, such as was the case for Bakti from India in relation to the circulation of her digital story on space2cr8. In constructing digital content, youth are also engaged in producing or remixing multimodal material based on certain aesthetic design principles that constitute a visual rhetoric for combining images, audio, video, and texts (Black, 2008). For example, in designing a fan site for a punk rock band, one teen was aware of how altering, modifying, sharing, and remixing images projects certain aspects of their own identities in ways that will appeal to teen audiences, again, enhancing their sense of agency as digital artists (Leander & Frank, 2006; cf. Hull & Nelson, 2010).

These online learning experiences involving public, social display of visual rhetoric are redefining what it means to learn ELA. Students are constructing meaning as negotiated and knowledge as relational, generative, engaged, and dilemma-driven within specific communities (boyd, 2009). In doing so, they are moving from uses of signs as words, images, sounds, and gestures to uses of signs as part of sign systems with multiple modes and genres (Finnegan, 2002). In traditional educational research, linguistic systems and cognitive systems are central to learning: writing and reading print, talking about print, formulating concepts, activating schema, assimilating and accommodating information. In contrast, new semiotic systems explore multimodality by looking at how all resources (linguistic, visual, audio, actional/performance) can be selected, organized, and produced to make meaning (Jewitt & Kress, 2003). Further, an attention to play, pleasure, and performance in online communicative environments calls attention to the often neglected place of emotion and desire in identity formation and learning.

**Transforming ELA Instruction through Use of Web 2.0 Tools** These changes in uses of Web 2.0 for constructing knowledge and identities require transforming ELA instruction (Beach, Anson, Kastman-Breuch, & Swiss, 2009; Carrington & Robinson, 2009; Davies & Merchant, 2009; Lankshear & Knobel, 2008; Richardson, 2009). A transformed ELA curriculum builds on a range of social practices: play, performance, simulation, appropriation, multitasking, distributed cognition, collective intelligences, judgment, transmedia navigation, networking, negotiation, and awareness (MIT New Media Literacy Center, 2008). Unfortunately, analysis of current school instruction finds little evidence of students using Web 2.0 tools for engaging in critical inquiry or for producing/publishing digital content for audiences outside the school (Luckin et al., 2009). Students are not exploiting the full potential for uses of Web 2.0 tools because their schools’ ELA curriculums remain organized around print-based paradigms that perceive digital tools as merely an add-on rather than as a transformation of ELA. Moreover, uses of Web 2.0 tools continue to mirror lived-world social and economic inequalities. For example, White middle-class adolescents perceive MySpace as more appropriate for working-class/non-dominant adolescents while Facebook is considered to be more for middle-class adolescents (boyd, 2009). And, disparities in broadband access, particularly in the home or school, leads to disparities in skills in using Web 2.0 tools based on in race, class, and gender differences (Hargittai & Hinnant, 2008).

Despite these challenges, we remain hopeful that Web 2.0 tools can serve as levers to transform ELA instruction, as illustrated by examples to follow in five areas: digital storytelling, social networking/use of mobile devices, text processing, and text construction. These illustrations lead to recommendations for reimagining schooling, teacher preparation, and conceptions of development.

**Digital Storytelling.** “Let’s make a movie.” This seemingly simple invitation is a staple in the digital storytelling workshops where participants’ audio-video stories are rendered into movies driven by a subversive, empowerment motive of what some have called a global “social movement” (Hartley & McWilliam, 2009): to put in the hands of everyday people, as opposed to an elite mass media or cadre of film experts, the power of narrative and self-expression through the creation of personal movies. Digital storytelling, fostered by organizations such as the Center for Digital Storytelling (http://www.storycenter.org/), ranges from the efforts of individual educators to introduce the practice to their students to a large, multi-year effort sponsored by the British Broadcasting Corporation to “Capture Wales” (http://www.bbc.co.uk/wales/audiovideo/sites/galleries/pages/capturewales.shtml). With the advent of Web-based video-sharing capabilities such as YouTube and more generally the explosion of social networking sites, the possibilities for distributing digital stories and for increasing their reach have similarly expanded. Now it is possible, for example, for the BBC to post the hundreds of stories collected in Wales on its Web site, and a girl in India can have the experience through her participation in a social network of influencing youth in the United States and South Africa through her digitalized narrative depiction of a day in her life.

Researchers have focused on how digital storytelling functions as a “technology of the self,” to use Foucault’s term, or a powerful kind of cultural tool that fosters and shapes the enactment of identities (Lundby, 2008). Out-of-school programs that focus on digital storytelling have served as alternative spaces for identity formation that allow students labelled as unsuccessful during the school day to reinvent their biographies as learners (Hull, Kenney, Marple, & Forsman-Schneider, 2006). To understand students’ aesthetic considerations in constructing digital stories, researchers examine the semiotic affordances of multi-modal combinations of print, image, voice, and music that appeal
to peer audiences (Hull & Nelson, 2005; Leander, 2009). The ease via Web 2.0 tools of constructing multimodal artifacts, and the importance of what Willis (1990) has called "symbolic creativity" among youth, suggest the need for an "aesthetic turn" (Hull & Nelson, 2010) in literacy studies. As they engage in multimodal production, students are acquiring aesthetic stances as to what constitutes effective forms of visual rhetoric through performance, the production of artifacts, and the stylization of bodies that constitute new ways of knowing and enacting identities. In their study of music in Columbian youth cultures, Muñoz and Marín (2006) find that participation in an artistic process, such as music-making, "leads young people towards self-creation, to the production of new subjectivities—to the search for, and generation of, something else in the domains of ethics, politics, art and forms of knowledge converted into praxis" (p. 132). They describe what they term the "motor forces of creation" (p. 132) that drive or liberate creativity in youth cultures.

Research on digital storytelling and a range of semiotic systems suggests the need to transform ELA instruction such that it includes a focus on multimodal construction that also draws on informal personal learning experiences (Careington & Robinson, 2009; Siegel, 2006). Future research needs to address the tensions between attempts to implement digital storytelling in schools dominated by incompatible accountability systems and print-based ideologies and practices. While most work on digital storytelling focuses on its potential and the positive effects of authoring personal mediated stories, other commentators have begun to document the cultural, social, and institutional constraints that work against giving voice to marginalized populations, and indeed, the contradictions within that very impulse (Taub-Pervizpour, 2009). Similarly, while most research focuses on the social practices that characterize youthful engagement in creating multimodal texts, there has been less attention to the consequences of the circulation of those texts, which can take on an unexpected agency of their own (Nelson, Hull, & Roche-Smith, 2008). And, given the aesthetic dimensions of multimodal production, researchers could helpfully consider what constitutes effective visual rhetoric in uses of genre conventions associated with online narrative forms (Coudry, 2008).

Social-Networking Sites/Mobile Devices. Social networking sites such as Facebook and Myspace allow users to represent themselves by creating a profile that includes text, images, and video; to create and continually add to a list of friends within the network; and to correspond publicly with those friends by posting greetings, news, photos, status updates, etc. Social networks are currently theorized as prime sites for experimentation with self-presentation; the maintenance of social ties and real-time connection; and the creation and exchange of social capital (Tu, Blocher, & Roberts, 2008). Such sites are viral among young people: a now dated estimate is that 55% of U.S. teens online have online profiles (Lenhart & Madden, 2007). Indeed, the practice has spread around the world, and even in countries with fewer ICT resources, such as many on the African continent, there is nonetheless growing participation. As social networks (and other Web 2.0 tools) migrate from computers to mobile phones, they will achieve greater prominence in such countries still, where the inventive use of cell phones has long trumped computers with their expensive bandwidth requirements.

Much research on social networking currently relies solely on large-scale surveys, small-scale interviews, and analyses of content found online, almost always without benefit of participant observation and cross-site comparisons, both online and offline. Research on educational or literacy-related applications are just beginning (see, for example, Beach & Doerr-Stevens, 2009; Hull & Nelson, 2010; Kirkland, 2009; Knobel & Lankshear, 2008). Educators and organizations have begun to use social networking tools in their classroom, even as schools and governments wrestle with concerns about privacy, access, and safety, choosing sometimes to ban the sites or regulate their usage severely. Through their participation in these sites, students are acquiring literacies involved in socially recognizing ways/or practices for presenting themselves by customizing their profile pages, creating meaningful content valued by their network group, employing discourses constituting their online identity, and using encoded texts such as images or videos to communicate in multimodal ways (Knobel & Lankshear, 2008).

ELA teachers also use online asynchronous and synchronous discussions sites using Moodle, WebCT/Vista, Drupal, Ning, Tappedin.org, etc., for interactions across schools or countries on sites such as Youth Voices (http://youthvoices.net/elgg) or TakingItGlobal (http://discuss.tigweb.org). For example, high school students used a Ning to engage in an online role-play debate on the issue of blocking web sites in their school by creating profiles and adopting pro-con roles, material they used to convince their school administrators to unblock sites (Beach & Doerr-Stevens, 2009).

Among the uses of social networking sites that teachers could exploit is its potential to erase traditional face-to-face boundaries and to create new virtual spaces that allow for global, cross-cultural interaction (Appadurai, 1996). Social networking sites are currently used most typically to connect to friendship networks that already exist offline; research shows as well that racial, class, and geographic boundaries that exist offline are usually maintained on digital sites (Hargittai & Hinnant, 2008). Yet, Silverstone (2007) has called eloquently for the creation of a moral sphere in the use of media, whereby we all become more attentive to responsible representations and interpretations of others. The Youth Voices, Taking it Global, and space2cre8 projects are examples of how teachers can reconceptualize language arts activities in ways that encourage children to bridge cultural, linguistic, geographic, and ideological divides.

Text Processing: Informational Literacies. Increased uses of online text production (Lenhart, Arafeh, Smith,
Macgill, 2008) also involves informational literacies of processing, accessing, subscribing to, and tagging online material. The multimodality of online texts serves to accelerate and bootstrap lower-level processes like decoding from the surface and propositional levels of a text involving bridging processes that build on readers’ prior knowledge and experiences with print texts (Kress, 2003). In contrast to print texts, processing online texts requires readers to formulate purposes for reading that guides attention to certain signaling cues, text structure, and authorial intentions (Kress, 2003), as well as knowing how to select certain links as both semantic and navigational elements (Burbules, 2007). Links are read as presenting potential meaningful associations between web pages or web page elements; as such, the links are read critically to help one construct meaning one way or the other, depending on how readers suppose the links connect pages. In reading online texts, readers also adopt scan-and-skip processing without reading every word, requiring students to know how to highlight and vary their processing rate (Coiro & Dobler, 2007). Given this scan-and-skip reading process, in constructing texts, students need to know how to employ an “inverted pyramid” organizational structure by initially stating their overall topic summary in the beginning of their text.

In addition, online settings change the roles of readers and texts. In agent-based literacy theory, (McEneaney, 2006) an online environment, which is more interactive than a traditional print-based environment, enables text to “act on” readers. When reading online, readers encounter texts that, unlike static documents in print, are more accurately depicted as networks of nodes and links that define a virtual structure—the new textuality and intertextuality. The virtual structure, which is unfolding rather than the static, fixed, structure ascribed by traditional theories of text and comprehension enables many possible readings, depending on how readers choose links (McEneaney, 2006).

Researchers have also examined how students construct their own implicit theories about reading online (Coiro & Dobler, 2007). For example, sixth-grade students perceived online reading as faster than print-based reading, involving a “snatch and grab” approach to obtain immediate results (Sutherland-Smith, 2002). Students also had difficulty with web authorship and assessing the credibility of online information. Determining the credibility of multimodal texts, especially on/within the Internet with its “vast network of relations of credibility” (Burbules & Callister, 2000), is particularly challenging because these texts mix images, music, graphic arts, video, and print to make sophisticated claims supported by various forms or types of evidence. The identification of literacy practices unique to online text processing requires new theories of how knowledge domains are represented in texts and the flexible reassembly of existing knowledge with new knowledge needed, as well as new approaches to reading instruction (Coiro & Dobler, 2007). Students need to acquire a cognitive flexibility to process online knowledge as ill-structured, random, or contradictory by knowing how to frame their searches in terms of specific purposes, select relevant links, monitor their pursuit of information, assess the credibility of information, tag or categorize material for later use, and reflect on subsequent next moves. All of this points to the need to transform current print-based “reading” instruction in ways that account for new ways of processing online texts.

Constructing Texts. ELA teachers are also using Web 2.0 tools such as blogs, wikis, collaborative writing tools, and e-portfolios to construct texts (Beach, Anson, Kastman-Breuch, & Swiss, 2009 [http://digitalwriting.pbworks.com]; Carrington & Robinson, 2009; Davies & Merchant, 2009; Richardson, 2009). Students can use these tools to communicate with a wider range of audiences than simply the teacher, leading students to engage in self-initiated blog writing based on their sense of responsibility to their audiences—the fact that they can share their writing with audiences enhances their enjoyment of writing in school (Lenhart et al., 2008). For example, fifth-grade students who received comments from peers and people outside of their class were motivated to improve their writing because they enjoyed receiving comments, which they used to further explore the topics being addressed (Davis & McGrail, 2009). Given their interaction with peers’ ideas, students engage in summarizing, “forwarding” or “extending” those ideas for constructing new knowledge (Harris, 2006) or used fictional blogs to collaboratively construct ongoing narratives across different posts (Thomas, 2007). Students also learn to use wikis or tools such as Google Docs for collaborative writing; students can also create or edit Wikipedia entries.

As is the case with processing texts, learning to create multimodal, interactive, hyperlinked texts also requires transforming print-based “writing” instruction to foster uses of these features. For example, learning to engage in effective wiki writing requires modeling of use of wiki features, providing strategies for collaboration, fostering a sense of ownership, and evaluating according to achieving one’s intended goals (Cleary, Sanders-Betzold, Hoover, & St. John, 2009).

Uses of Web 2.0 Tools To Transform English Language Arts and Schooling While these use of Web 2.0 tools are challenging status quo conceptions of what counts as language arts, their broader implications push us to rethink status quo spatial and temporal boundaries that have defined schooling as occurring in particular locations during set periods of time, blurring in-school and out-of-school contexts in ways that go beyond the dichotomies of the past. There is also a potential change in the locus of agency for learning, as students take on productive and interpretive authority. New conceptions of learning in Web 2.0 environments emphasize sociality: collective intelligence; interactions among peers and distant audiences; and a new consciousness of and facility with always being connected to information, people, and places. In addition to solitary confrontations with texts and abstractions, there is the possibility of play, performance, joint problem-solving, and interaction. Such notions imply
very different conceptions of educational institutions, as illustrated by a school opened in 2009 in New York City that is organized around the design principles associated with games. At the Quest to Learn school (http://q2l.org/), youth not only use Web 2.0 tools, they learn to design them. And in fact, design and innovation are the school’s calling cards, along with the underpinning assumption that youth in our new century learn in different ways via interactions with digital tools.

Redefining ELA and rethinking schooling and notions of childhood and development also require transforming ELA teacher preparation so that preservice and inservice teachers acquire technological pedagogical content knowledge (TPACK), the integration of ELA content, ELA pedagogical content knowledge, and Web 2.0 tools (Mishra & Koehler, 2006, p. 1029), not simply to change instruction, but also to focus on changes in student learning (Hughes & Scharber, 2008). Teachers can also use Web 2.0 tools such as digital portfolios or annotations of videos of their teachers to engage in self-reflection leading to change, particularly through publicly sharing of work with colleagues on teacher research network.

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