The Landscape
of Digital Writing

> Teenagers' lives are filled with writing. All teens write for school, and 93% of teens say they write for their own pleasure. Most notably, the vast majority of teens have eagerly embraced written communication with their peers as they share messages on their social network pages, in e-mails and instant messages online, and through fast-paced thumb choreography on their cell phones. Parents believe that their children write more as teens than they did at that age. This raises a major question: What, if anything, connects the formal writing teens do and the informal e-communication they exchange on digital screens?
>
> —Lenhart, Arafeh, Smith, and Macgill, 2008, i

Today, students are doing an immense amount of writing—they're blogging; they're text messaging; they're e-mailing; they're updating their status messages, profile information, and live feeds on social networking and other sites; and others are "tweeting" (using microblog spaces and sites like Twitter). Perhaps most interesting in the midst of all this writing students are doing is that they don't often call it "writing." Writing, students note, is something they do *in school*. What they do with computers outside of school is *something else*. As a recent Pew Internet & American Life report on teens and writing noted,

> At the core, the digital age presents a paradox. Most teenagers spend a considerable amount of their life composing texts, but

they do not think that a lot of the material they create electronically is real writing. The act of exchanging e-mails, instant messages, texts, and social network posts is communication that carries the same weight to teens as phone calls and between-class hallway greetings. At the same time that teens disassociate e-communication with "writing," they also strongly believe that good writing is a critical skill to achieving success—and their parents agree. Moreover, teens are filled with insights and critiques of the current state of writing instruction as well as ideas about how to make in-school writing instruction better and more useful. (Lenhart et al., 2008, 2)

A look at the ways in which students are writing today helps clarify the nature of what has been called the "digital revolution." The digital revolution isn't necessarily that we have computers, or that we have computers in schools, or that Internet access has spread so broadly in the United States. For many years, critics of computers in schools have noted that they sit unused at the back of classrooms or, worse yet, that they merely provide "edutainment" for students who cannot engage with typical forms of instruction. (See, for instance, critiques offered by Cuban, 1986, 2001; and Oppenheimer, 2003.) Yet this has not stopped the digital revolution, because the revolution isn't about the tools, but rather how the tools are used. Many technologies have changed writing and writing processes—from chalk to pencils to the typewriter. The networked computer has *dramatically* changed writing and writing processes, and the ways in which people are using the Internet, as well as the sheer numbers of people writing on and with the Web, are having significant social and cultural impact.

This chapter surveys the new digital landscape for writing and examines why digital writing is complex and challenging, for both teachers and students. It identifies and explores some of the complexity that educators and policymakers should understand if they are to develop and sustain effective digital writing programs or curricula. It addresses as well some of the myths and realities surrounding the teaching and learning of digital writing practices, and begins to suggest ways that teachers and administrators can assess how well digital writing is being taught in their schools.

DIGITAL WRITING = WRITING + READING + LISTENING + COLLABORATING

Because Writing Matters presented a compelling vision of writing, arguing first and foremost that writing is hard work. Writers explore and generate ideas, shape their writing for particular audiences and purposes, and work to craft language to convey meaning. Writing well means taking risks, and allowing time to brainstorm and experiment, and later revising and revising (and revising again). When we write, we must be both writer and reader, stepping in and out of a text as we rework it over time for a particular rhetorical situation. As noted in *Because Writing Matters,* this is the recursive and social nature of writing, as years of research in written composition have chronicled.

As the personal computer made its way into the market, many argued that computers would make work tasks—including writing—easier and faster. Certainly, computers allow writers to engage in the work of writing differently, definitely more easily, and perhaps even better: the ease with which multiple drafts can be saved, material can be copied and pasted, and text can be moved around in a document is facilitated by today's word processing programs. Spell-checkers and editing programs can speed up the labor of proofreading, and document design programs can help even novice designers create attractively formatted final products.

But at the same time, computers also provide a more complex space for writing, offering writers a whole new set of options to consider. Computer composition allows for multimedia components such as voice recording, audio, image, video, and more. Along with these media components, writers have access to an array of tools and spaces in which texts can be composed and shared. Writers can shift easily among several different programs including e-mail clients, RSS-feed readers, wikis, blogs, and a number of other increasingly customizable online tools. These online tools allow for virtually instant sharing of texts throughout the writing process, enabling the composing process to be public and interactive from the earliest stages. So for anyone who imagined that computers would make writing easier, the irony is that by making a host of individual tasks easier, computers have dramatically expanded options for writers and have probably made writing, and learning to write, more complex.

Consider this story of Dànielle DeVoss's experience in working on this chapter:

> I sit down in front of my computer, coffee in hand. Once my computer has booted up, I launch my applications in the order I tend to use them: WordPerfect (word processing); Eudora (e-mail); Mozilla Firefox (Web browsing and access to Google Docs); Adobe Photoshop (for image editing); Microsoft Word (word processing . . . yes, I use two because although I learned to write with computers using WordPerfect—version 1.0, with its entirely blue screen, before the computer mouse was created!—most of the people I collaborate with use Microsoft Word); and also AIM and Yahoo! Messenger, both for instant messaging (most of the students I work with use AIM, while most of my friends use Yahoo! Messenger).
>
> My Firefox homepage is a customized Google News page, and it loads first. I spend a few moments scanning headlines, and open up a few new tabs—one to check my current eBay bids, one to access the MSU Library's online journals, and another for my Google Docs menu. A couple of people instant-message me to confirm meetings later in the day or to say hi while I'm waiting for my e-mail to come into my inbox. Once my e-mail comes in, I triage, sorting e-mail by priority. Students with questions or concerns get top priority. Administrators with questions or concerns get second priority. Family and friends I save for later in the day. Facebook requests I ignore.
>
> I toggle into WordPerfect and open the "to do" list I update daily and work by religiously. I prioritize the day's items, then toggle into Word to open the first few documents I need to work on: an advising form for a student I will meet with later in the morning, the draft of this chapter, and the table of contents for another book collection I'm working on.
>
> I head to the middle of this chapter, to return to a spot I digitally marked two days earlier—I marked it to return to when my mind was fresher. I think about how I can edit the section,

and know I have a good quote that might spark me, embedded in a slideshow presentation I used in a workshop two weeks prior. I launch Microsoft PowerPoint, find the slideshow I'm thinking of, and there's the quote. I copy and paste it into the Word document.

I receive an e-mail from a graduate student working on a project, and send her the files she needs for the document she's working on. A friend of mine sends me a link via instant message, and I take a moment to watch an ad (that he considers hilarious) from the 1980s, now living on YouTube. I pause in remembrance of a YouTube-free world. While I'm in Firefox, I toggle back to my Google Docs tab to check on another document—a conference presentation proposal—I'm working on with two other colleagues. One of the other authors made changes the night before, and I review them, and add a sentence or two. I then head back to Word and continue working on this chapter.

Although many aspects of this digital multitasking might feel new—or even foreign—to writers who learned to write in different environments, it is clear that the work that scaffolds these tasks is similar to the "hard work" of writing in any environment. Composing still depends on phases of planning, reflecting, drafting, and revising, and writers still produce texts for audiences. Collaboration is still a key part of writing well—bouncing ideas off of others and getting feedback across the writing process. And writers still need to learn to manage time and attention to tasks in the face of competing priorities.

But still, there are important differences. In digital spaces, collaboration might happen via e-mail or instant messaging, or it might happen through a course-management system discussion board or some other space for sharing writing. Writing, at every stage of the process, can now be shared across time and space instantaneously to get a prompt response. Thus, the nature of digital writing is such that it both invites and, in some sense, demands instant feedback. Gone are the days when students turned in stacks of essays to a single teacher and were content to wait a day, a week, or a month for

feedback. Now students can participate in—or create their own—communities of writers. They are able to stay in touch with others through the RSS readers, social networks, e-mails, mobile phones, and other Internet-enabled tools, in ways that continue to bring text, image, audio, and video together, to share their personal and academic lives. These examples highlight the ways in which digital writing matters to those who are engaged in it.

Thus, the instant communication and always-on connection that students routinely experience in digital environments may be at the root of why students consistently distinguish between the writing that the Pew report called "e-communication" and the writing they are asked to do in school. New digital tools enable a strongly "participatory culture." According to media scholar Henry Jenkins and his colleagues (2006), a participatory culture is one

- With relatively low barriers to artistic expression and civic engagement
- With strong support for creating and sharing one's creations with others
- With some type of informal mentorship whereby what is known by the most experienced is passed along to novices
- Where members believe that their contributions matter
- Where members feel some degree of social connection with one another (at the least they care what other people think about what they have created)

As more and more young people experience this kind of culture around writing and media outside of school, they are likely to bring these interests with them to school. Fortunately for writing teachers, the elements of participatory culture—defined not by the tools but by the experience—can also characterize an effective writing classroom.

RESITUATING THE "DIGITAL GENERATION"

As computer and Internet usage grew throughout the 1990s, policymakers and educators began to focus on the "digital divide": the division in access to technology that separates our schools and children into "haves" and

"have nots." As has been reported for years, poorer districts are at a disadvantage in providing the hardware, software, Internet infrastructure, and professional development required to bring effective uses of technology into classrooms. Consistent attention to the digital divide has motivated efforts to expand access, including the substantial provisions of the Telecommunications Act of 1996, which gave the nation the E-rate program.

The law was designed, in part, to help support libraries and schools with the access costs for Internet connectivity. The E-Rate system was introduced within the Act, which allows eligible libraries and schools to purchase crucial infrastructure components. When he signed the 1996 Telecommunications Act into law, President Bill Clinton noted: "Today, the information revolution is spreading light, the light Jefferson spoke about, all across our land and all across the world. It will allow every American child to bring the ideas stored in this reading room into his or her own living room or school room."

Though continued efforts to address the digital divide are critical, many educators are now discussing a second divide: the "digital disconnect," which refers to the disconnect between the current "digital generation" who have grown up in networked environments and their older parents and teachers who have not. The disconnect is what fourteen-year-old "Arthus" discussed in an *EdTechLIVE* Webcast interview with Steve Hargadon, director of the K–12 Open Technologies Initiative at the Consortium for School Networking (CoSN) and founder of the Classroom 2.0 social network. Arthus offered this advice to English teachers: "Stop being so disconnected from the technology . . . learn that there's new ways of learning. It's not about learning the knowledge, but learning to think. All knowledge is a Google away" (Hargadon, 2007).

But schools may not necessarily realize that students hold these views, or agree with the ways in which technology learning is happening at their schools. As reported in *eSchool News* (Prabhu, 2008), Julie Evans, CEO of Project Tomorrow, the group that produces the annual "Speak Up" survey for students, noted that "two-thirds of principals in a recent survey said they believe their school is preparing students to be competitive in the global workforce. But most tech-savvy students didn't share that view." Students

reported using less technology in school even as Web 2.0 applications become more ubiquitous outside of school. This digital disconnect is something different from the classic construction of the digital divide. It is not simply about hardware and software (although those are certainly aspects of the disconnect). Instead, the disconnect is about the ways in which teachers and students perceive the application of technology.

Marc Prensky was one of the first to popularize the notion that today's students are the first to have grown up surrounded by digital tools and toys. In his now-famous description (2001), Prensky argues that current students are "digital natives," whereas those who teach them, who learned digital technologies as adults, are "digital immigrants." Digital immigrants, like all immigrants, retain certain "old world" ways of seeing and interacting with their current reality. According to Prensky: "Our students have changed radically. Today's students are no longer the people our educational system was designed to teach" (1). Our "digital native" students access, synthesize, and reply to information in ways that are fundamentally different from what most adults do. Yet we digital immigrants continue to teach "legacy content," or traditional curricula, rather than teaching "future content" such as "software, hardware, robotics, nanotechnology, genomics, etc." as well as "the ethics, politics, sociology, languages and other things that go with them" (4).

The insights of Prensky and many others are useful in pushing educators to consider how digital tools and technologies can transform education, but the distinction between digital natives and digital immigrants is only part of the story. Popular press articles are quick to characterize young people as a homogenous group and to talk about them with labels like "digital natives" and the "digital generation." However, this blanket labeling obscures the very important and fine-grained details related to writing with computers, and the very diverse backgrounds of different writers. Siva Vaidhyanathan, a media studies scholar, argued that this is a "generational myth." In an article in the *Chronicle of Higher Education* (2008, B7), Vaidhyanathan summarizes the clichéd expressions related to how we talk about the "digital youth," and argues that in his years of teaching and being around young people at both public and private universities, he has witnessed a broad, highly variable degree of "comfort with, understanding of,

and dexterity with digital technology." Vaidhyanathan warns us that when we talk of a "digital generation," we're leaving out the many, many people without access to digital tools or to the training and support necessary to use them well. It's important to note that in using such labels we create dichotomies and barriers that do a disservice to both teachers and students and may suggest that our new generations of digital natives need only be left alone to learn on their own. These labels, although convenient, generalize and thus obscure the details related to what both students and teachers actually can do with digital technology.

Recent ethnographic research has begun to paint a finer-grained portrait of the digital generation. In one large-scale study led by researcher Mizuko Ito (Ito et al., 2008), a team of ethnographers interviewed over eight hundred youth and young adults and conducted over five thousand hours of online observations as part of a three-year study of youth media use in the United States. Their findings confirm that the digital generation does, in fact, spend tremendous amounts of time using social networking and video-sharing sites, playing online games, and using mobile technologies such as iPods and mobile phones. Yet they also found many differences among young people in their interests, experiences, skills, and knowledge. Rather than suggesting that adults leave the digital generation to themselves to grow and develop in a digital world all their own, these researchers argue for the importance of adult models, mentors, and teachers to help young people learn to navigate the broader digital and social landscape.

> Youths' participation in this networked world suggests new ways of thinking about the role of education. What would it mean to really exploit the potential of the learning opportunities available through online resources and networks? Rather than assuming that education is primarily about preparing for jobs and careers, what would it mean to think of it as a process guiding youths' participation in public life more generally? Finally, what would it mean to enlist help in this endeavor from engaged and diverse publics that are broader than what we traditionally think of as educational and civic institutions?" (Ito et al., 2008, 3)

TEACHING WITH AND FOR THE DIGITAL GENERATION

The significant differences in access—access to tools and infrastructure, access to training and support, and access to reflective, educative environments with real mentors—constitute one important reason for schools to take up a conscious focus on digital writing as a mode of learning. For all the ways in which students are situated as the "Net generation" and the "digital generation" and "digital natives," simple access to technology tools will not ensure that students learn to be effective, thoughtful, and ethical digital writers. Teachers are still well positioned to take what Prensky calls the "legacy content" of our curricula and help students move into synthesizing information and creating the "future content." If the proliferation of twenty-first-century literacy standards has shown us anything, it is that educators are concerned about making this happen.

In addition to standards for the "what" of teaching, educators are also rethinking the "how" of teaching with technology so that meaningful learning results. Scholars Punya Mishra and Matthew Koehler (2006) refer to the complex knowledge required for effective teaching with technology as "technological pedagogical content knowledge," or TPACK. Mishra and Koehler argue that teachers have to take a variety of contextual factors into account when choosing how, when, and why to implement a particular technology in their teaching in relation to educational ends. As summarized on the TPACK wiki, these authors state,

> A teacher capable of negotiating these relationships represents a form of expertise different from, and greater than, the knowledge of a disciplinary expert (say a mathematician or a historian), a technology expert (a computer scientist) and a pedagogical

expert (an experienced educator). Effective technology integration for pedagogy around specific subject matter requires developing sensitivity to the dynamic, [transactional] relationship between all three components. (Mishra and Koehler, n.d.)

In short, teachers need to bring a particular expertise that can help them guide their students to become effective digital writers and able learners irrespective of the opportunities they may have outside of school. For teachers, it is not simply a matter of "integrating technology" into the school day, but rather a matter of uncovering the most powerful uses of technology to accomplish learning goals for specific students. To do this, they can create digital environments and experiences to extend their most effective practices into even more powerful learning opportunities for students.

For example, Betty Collum—a fifth-grade teacher at Eupora Elementary School in Eupora, Missouri, and the technology liaison for the University of Mississippi Writing Project—found that her students benefited from learning how to collaborate to improve their writing. Although many of her students had access to some technology tools, such as newer cell phones, they had little experience using networked computers in writing. With a focus on the affordances of collaboration in digital environments, Collum worked with her students to use the online word processing platform Google Docs and to learn about the process of podcasting—creating digital recordings with a simple audio editor, saving it as an MP3 file, and posting it to the class Web site.

For one particular project, she invited her students to create "two-voice tall tales," and they collaborated on everything from their initial drafts through their final podcasts. For Collum, the process required two major steps. First, she began by having students create their tall tale drafts in Google Docs. As she points out, "We are all familiar with word-processing software, as well as with the idea of sending an e-mail attachment to someone for editing and response. Yet Google Docs allows for multiple authors (or 'collaborators') of a document to log in, draft, track the revisions they make, and finally copyedit the work of others." For students, a collaborative tool like this can make the difference between a sequential, text-based,

in-class assignment and a lesson in deep revision with an eye toward preparing a text for publication. "It was basically like going through the writing process that my students were already familiar with because we had done it with paper and pencil," states Collum. Students revised their work many times, and Collum believes that the questions they asked each other about the plot and characters in the tall tales contributed to the quality of the drafts they prepared for recording to podcasts.

The second major step was to print the collaboratively authored and edited drafts and to read them aloud. These initial draft podcasts were reviewed by other students before being posted to the Internet: "We got a third-grade teacher to let her kids hear [them], and that was a really major response." Her fifth graders then made final revisions to their scripts and recorded for the final podcasts. Allowing students to use the digital recorders to capture their own voices enhanced revision, as students could move back and forth from their original writing to the recordings throughout the composing process. Once completed, the podcasts were shared on Collum's Web site. She argues for the activity and the publication of the stories by noting that "it is very important for students today to be aware, be familiar with, put their hands on different technology tools that they can use for different reasons." She adds, "Everything that we do, we related to long-term learning."

Although many of her students come to her having never used these digital writing tools, Collum finds that she can expose them to these technologies while also meeting the Mississippi state curriculum standards because she uses them in rich, integrated ways, not as isolated skills. Students in Collum's class learn about more than word processing software and audio-recording tools; they learn how to share their voices through collaboration across the writing process. These tools and experiences do not come from a single packaged program, nor do they happen in a lock-step manner. The tools and processes have been carefully selected by Collum for several reasons:

- They expose students to more generalizable strategies for digital writing that can be used inside and outside of school.
- They cultivate important skills, dispositions, and habits of mind that extend beyond the focused activities themselves.

- They involve students in creating and reflecting on multimodal compositions, helping students learn to manage the intersections of image, voice, and text.
- They involve publishing for real audiences and purposes so that students can experience and learn from the full writing process.

For Collum, it is vital that schools offer opportunities for digital writing as a counter to the digital divide that might otherwise limit students' opportunities and to the digital disconnect that might lead them to disengage with their writing. Her work, though, like the work of writing teachers more generally, addresses a third divide: the divide between consumers of media and creators of media. As computers and Internet access have become more common in our homes, libraries, and neighborhoods, this third digital divide has emerged between those who use computers and Internet access to *consume*—products, information, writing, and more—and those who *produce* such materials. Because digital information is such a large part of our current knowledge economy, the ability to create and to share ideas, arguments, materials, and information across digital spaces will become a more and more crucial skill for individuals, workers, and citizens.

Howard Besser, co-director of the Pacific Bell/UCLA Initiative for 21st Century Literacies, has argued that, while we should still continue to address issues related to access to technology, we should also be paying attention to how we can equip students to be more than passive information consumers.

Besser (2001) argues that as we look at the content available on the Web, we see that there is a *lack of local, contextual, relevant information,* especially for underserved populations; that there are *literacy barriers,* as most online content is written by and for people with strong literacy skills; that there are *language barriers,* in that most Web content is in English; and that there is a *lack of cultural diversity*—that is, it is hard for people to find content produced by other ethnically diverse Americans (a pretty homogenous group produces the majority of Web content). Besser encourages teachers to consider these four factors and to encourage students to be active participants "in the major communication functions of society." He notes that in a digital age, teachers should teach students how to "assemble their writings into

forms others will want to read, how to speak publicly . . . [and] how to author and distribute digital works." In the face of the glut of information available through the Internet, there is a real need for young people to learn to thoughtfully create, as well as judiciously consume, Web content.

THE NEW DIGITAL LANDSCAPE: SIMPLER TOOLS FOR A MORE COMPLEX WORLD

Betty Collum's use of Google Docs illustrates significant new options in the digital landscape. Users of this and similar online services, often referred to as "cloud computing," have instant access to the latest versions of the software as well as the opportunity to use the same tools in school and out. Podcasting can be effectively accomplished with simple digital recorders, free or low-cost editing software, and simple distribution Web sites. For schools that previously would have struggled to budget for equipment or puzzled over choices among competing stand-alone word processing programs and platforms, the greater array of Internet-based composing and publishing tools allows for a quicker, more flexible entrée into digital writing.

For many school districts and school boards, these changes can motivate a turnaround in thinking. Originally, computers were slow to enter into classrooms, and when they did, they brought with them significant challenges. Early computer purchases were costly and the machines difficult to use; often, when school districts or individual schools purchased computers, the entire budget went toward the machines themselves, leaving no budget for training and support. In many schools, this resulted in the computers' sitting and gathering dust in the back of the classroom or lab because the teachers had not been provided with the professional development necessary to richly integrate the computer into their practices. In addition, early computers were (comparatively) difficult to use and limited in scope. Amidst the early promotion—some might say hype—of technology in schools, many educators sensed that the machines were not delivering real educational value, and felt that their concerns about the computers' use were not being addressed by policymakers and ed-tech enthusiasts.

In a 2002 article reporting on a technology workshop for teachers of fifth through twelfth grades and their students that enabled them to work

together on technology integration and equipped the students to be technology coordinators and helpers in their schools, Dànielle DeVoss and Dickie Selfe (2002) described challenges they observed as teachers worked to integrate computers into their classrooms, lesson plans, and daily work:

- **Inadequate training:** Computers are very complicated tools that in and of themselves don't necessarily make anything easier or faster. For computers to be richly connected to curriculum, a great deal of time and training must be allocated to their integration, and, unfortunately, few schools had (or now have) the means to provide appropriate and adequate training, especially considering how fast technological tools evolve.

- **Shifting notions of texts:** Where does grammar instruction fit, for instance, in slideshow presentations? What happens to the thesis statement in a digital movie? Teachers require new layers of literacies to use and integrate computers in the classroom in ways that do not distract from but instead complement writing practices. And not only do teachers require these literacies, they have to be able to teach and assess them.

- **Shifting notions of literate citizenship:** Students rely on skills that allow them to navigate video games, to search through complex systems, to hack through school- or parent-constructed firewalls, and more. Not surprisingly, teaching new literacies is remarkably difficult in an environment where both technology and digital literacy practices change so rapidly that our schools—including our public schools, and especially our public schools in poor or poorly funded districts—struggle to keep up.

- **An array of student technological skills:** Classrooms are and have always been complicated spaces where a range of abilities are enacted. Technology adds a new layer to these complications, as students bring with them remarkably different technology backgrounds and digital literacy skills.

- **Privacy and personal safety challenges:** The American public has read headlines over and over again in the past fifteen years or so regarding

young people "in danger" while participating in online networks. In the classroom, teachers have to negotiate their best practices and the best sites to integrate teaching with the protection of students' identities and privacy in digital spaces.

- **Timing and access:** Teachers who have limited access to computer labs or who have to schedule time in computer labs weeks in advance recognize issues related to timing and access. Just-in-time teaching—having the ability to address student questions, concerns, and writing-related needs as and when needed—is ideal, but when computer lab access is scheduled for the semester or the school year weeks in advance, it's tricky to create a just-in-time environment.

- **Standards and autonomy:** All teachers operate within standards, their implementation, and their assessment. All teachers have to negotiate their classroom and school autonomy within the framework of standards and testing. Because digital writing tools and spaces evolve constantly, no one standard or set of standards will capture entirely or specifically the skills our students need to best equip them in a twenty-first-century world.

- **Public scrutiny:** If teachers have students use authentic, real-world digital tools and spaces in their classrooms, this often means they're having students write to an audience beyond the classroom. In this context, student-produced drafts might be taken out of context, and student work is more visible than it perhaps has been in the past.

New options, such as cloud computing, where composing happens online and is accessed through a simple Web browser, are having an impact on at least some of the challenges noted above. Issues related to particular tools and their uses for digital writing are less often mechanical and more often curricular. As the technologies of digital writing continue to evolve, so too do notions of what is acceptable and ethical in terms of when and how to use technologies. For instance, the notion of copyright has undergone significant consideration in the past decade, as file-sharing sites were started and stopped (and started again). "Fair use" has taken on new meaning in digital writing contexts and an entirely new system of copyright, Creative Commons (creativecommons.org), has emerged to support what

scholar Lawrence Lessig (2005, 2008) has called "the remix culture." As a result, the ways in which schools are designing and implementing acceptable use policies (AUPs) continue to push on all these fronts—addressing new hardware and software; uses of the Internet for communicating inside and outside of school; and the ways in which students take information from, repurpose, and post information to the Internet. It used to be that AUPs essentially asked students not to hack the network. Increasingly, they are becoming contracts about how students should act as digital citizens. In short, the landscape of what it means to be a digital writer is increasingly complicated.

But even if the landscape is increasingly complicated, it may also be increasingly fascinating as these are, in fact, the real issues in writing today. The evolution of copyright is not just a school exercise, but is central to how we are coming to understand composition and intellectual property for all writers. Digital citizenship is as relevant outside of school as inside. When Betty Collum's students post podcasts on the Web—and when young people engage in texting, IMing, blogging, and other tasks outlined in the Pew report noted above—they are not merely rehearsing digital writing. They are writing for real audiences and for real purposes.

MEETING THE CHALLENGES OF TEACHING AND LEARNING DIGITAL WRITING

> Writing today is not what it was yesterday. New technologies and new job tasks have changed the meaning of what it means to write and write well. Our educational institutions know they must review what constitutes effective instructional practice to ensure that writing curricula and instructional methods support writing excellence, incorporate technology, and engage and motivate students at all ages.
>
> —Lenhart et al., 2008, 3

So how do we meet the challenge? Colin Lankshear and Michele Knobel (2006) suggest that these types of challenges are less about the technology

itself, and more about our mind-set toward its use. They outline two mind-sets toward technology that guide our thinking about effective technology use. In the first mind-set, people assume "that the contemporary world is essentially the way it has been throughout the modern-industrial period, only now it is more technologized, or, alternatively, technologized in a new and very sophisticated way" (33–34). In other words, technology hasn't changed much about the ways in which we perceive our economic, social, and educational systems except that it might allow us to do old things in new ways.

The second mind-set, on the other hand, "assumes that the contemporary world is different in important ways from the world we have known, and that the difference is growing." Enabled by newer literacies and technologies, people are "imagining and exploring how using new technologies can become part of making the world (more) different from how it presently is" (34). As many of the Web 2.0 examples mentioned in this book—such as blogs, wikis, social networks, and photo-sharing sites—show, people are creating, distributing, and remixing the "content" of their lives in ways that were either very difficult or completely impossible before the advent of digital media and the Internet.

If it is true that we are "making the world (more) different from how it presently is," teachers will need the opportunity to learn about and explore this change from inside of it. If digital writing is not, in fact, a "legacy content," then we cannot expect teachers to "inherit it and transmit it"; instead, we continue to learn as we go. As we consider the ways in which digital writing improves student writing overall, we need to consider both the ways in which teachers of writing are introduced to technologies and how teachers of writing address the academic and affective needs of their students, as in the process of creating digital stories.

CREATING DIGITAL STORIES

For Bonnie Kaplan and Clifford Lee, the process of learning how to create digital stories transformed their understanding of what it means to be a teacher of writing as well as of how to engage their students as writers.

Digital storytelling has its roots in the oral tradition of storytelling, and fails to fit into a single definition. In *DigiTales: The Art of Telling Digital*

Stories, Bernajean Porter describes it as engaging with a "palette of technical tools to weave personal tales using images, graphics, music, and sound mixed together with the author's own story voice" (2005, 1). The Center for Digital Storytelling suggests that digital storytelling is a process of "using the tools of digital media to craft, record, share, and value the stories of individuals and communities, in ways that improve all our lives" (n.d.). No matter what the definition, digital storytelling requires teachers and students to shift their thinking about what it means to be a writer, how composing happens, and to whom writing is ultimately addressed.

For Bonnie Kaplan, adjunct faculty member at SUNY–New Paltz and co-director and technology liaison for the Hudson Valley Writing Project, digital storytelling allows teachers the opportunity to talk about a previously nebulous aspect of writing: cultivating voice. Despite the numerous books, articles, and conference presentations about how to help students create a writerly voice, the actual development of such has eluded writing teachers for years. Kaplan suggests that digital storytelling allows writers to express voice in a variety of ways and, in turn, improves their understanding of what it means to be a writer.

Because of the multimedia nature of digital stories, students are able to combine images; video; music; and, quite literally, their own voices into compositions that have an effect more powerful than the written word alone. In workshops with teachers in which they compare traditional forms of writing with students' digital stories, Kaplan claims, "the language [teachers] use to describe the power of voice was much more in depth. There was thought behind it. They were making some immediate connections, visualizing their own classes, and thinking about how their own students could develop their literacy, how this would work in a much more specific way in the development of writing."

Kaplan found that as students moved from writing their stories to gathering media to producing and revising their final stories, teachers felt "this would be such a great hook for them to get kids actually to write." The writing process itself moves from being a fixed set of steps to a more open and recursive journey. "The text can't be fixed," says Kaplan. "If you write a piece by itself, in isolation, you need to be open to its change and transformation."

Similarly, Clifford Lee, formerly a teacher at Life Academy School of Health and Bio Science in Oakland, California, and currently a graduate student in urban education at UCLA, reports that his students became more engaged as writers through the process of digital storytelling. Lee and his colleague Yumi Matsui from the Bay Area Writing Project facilitated a digital storytelling project where students interviewed family and community members to better understand the immigrant experience in America. And this process helped students develop new voices as writers.

One benefit, says Lee, was that "students did multiple revisions on their writing." This occurred for a variety of reasons, some pedagogical and some related to the purposes of and final audiences for the project. For instance, one process Lee asked his students to engage in after getting a rough draft of their story outlined and then timelined was to focus on their spoken narration. He asked them to listen only to their own spoken voices, "just so that students could really focus on how their voice-over narrative drove the story, and [could make sure that] the images and music were complementary to their story." Through this process his students realized that they didn't need to rely on the old writing adage "show don't tell" in every aspect of their story, because their images could speak, too: "Sometimes they started thinking that 'less is more' in their writing, and that the images could drive the story."

Also, Lee noticed that "students went out of their way, on their own, to revise." He continues, "We often force students to make several revisions and have peer edits, but this time we noticed that students were eager to revise it and get feedback from others because they knew that the final project would be shown to an audience that included the person that they interviewed, family members, and community members." This sense of audience and purpose guided students throughout the composing process, and typically paid off in more than a few tears during the exhibition night performances at the school.

For both Kaplan and Lee, their work to create digital stories with students stemmed directly from experiences that each had had in effective professional development. Kaplan suggests that "if you are going to do a workshop, teachers need to have a hands-on experience and leave with something more than, 'Wow, isn't this exciting?'" By focusing on one digital writing process, such as digital storytelling, over a sustained series of

professional development sessions, teachers are able to engage in the process and think about how to incorporate this type of writing into their classrooms. Lee credits his willingness to move beyond "typical" uses of technology in his classroom to a weeklong workshop that he attended sponsored by the Bay Area Writing Project and Pearson Education Foundation. For both teachers, lots of time for them to play and develop their own stories led to an understanding of how to use digital storytelling to improve student writing.

SHIFTING RHETORICAL TERRAIN

As noted in the introduction, the WIDE Research Collective (2005) argued that writing instruction must equip students with the tools, skills, and strategies not just to produce traditional texts using computer technology but also to produce documents appropriate to the global and dispersed reach of the Web. This change requires a large-scale shift in the rhetorical situations students are asked to write within, the audiences they write for, the products they produce, and the purposes of their writing. They proposed a set of pedagogical requirements for doing so:

- **Rich contexts for writing**. By this, they mean both spaces that allow students to write with computers and share that writing, and assignments and approaches that encourage students to do so in appropriate ways.

- **A rhetoric that is technological, social, and cultural**. The WIDE Research Collective argued that traditional approaches to audience, context, and purpose certainly carry over into digital realms, but that we must also attend in different and perhaps new ways to the social and cultural contexts of digital writing.

- **An analytical, thoughtful, critical consciousness of technology**. When students live technology-rich lives, and when many technologies become ubiquitous, we must work to remind learners to question technology, to analyze tools, and to carefully select the best tool available for a particular meaning-making task.

- **A "learning how to learn" approach**. Because technologies change and evolve so quickly, it is in our and our students' best interests to teach

approaches that transcend specific technologies and can be brought to bear in different contexts and with different tools. In this way, students can change and evolve with technology rather than remain rooted to skills anchored to one particular tool or technology.

- **A recognition of multimodal approaches to writing**. Approaches include writing as text, with images, with audio, with hyperlinks, and much more. Students need to understand how these media work for different audiences and in various contexts and how to layer and juxtapose media to create sophisticated messages.

This is the new "content" that teachers of digital writing must explore with their students, and the first step toward exploring that content for teachers is often the opportunity to work as digital writers themselves and then to receive the support necessary to work and publish in digital environments with their students.

Teachers can't do it alone, of course. Improving digital writing requires a sustained schoolwide effort. Public opinion surveys, interviews with students, and conversations with educators point toward the importance of critically and carefully navigating and putting to use twenty-first-century tools for writing, yet the Internet, the Web, and computer access are still relatively new in our classrooms. For Collum, Kaplan, and Lee, their roles as teachers have changed vis-à-vis the use of digital writing tools; that shift can be incredibly complicated, yet also incredibly rewarding. Thus, in the next chapter, we discuss the ways in which teachers have navigated changes to their roles, and adaptations in their stances toward teaching in tandem with emergent digital technologies.