Challenges for Writing Teachers

Evolving Technologies and Standardized Assessment

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TECHNOLOGY AND THE EVOLUTION OF WRITING, 1980–2008

There is a general consensus among teachers and researchers that reading and writing are changing, driven by the pressures of emerging technologies. Newspapers are in decline nationally, as advertising revenues migrate to the internet. Even the *New York Times* asks, on its own pages, "How much longer will the newspaper itself exist?" as citizen-reporter blogs routinely beat print media to breaking news (Dunlap, 2007, p. 5). And a range of studies documents the ways in which teenage literacy has changed, no longer exclusively the private book world of the print reader, but now the more social worlds of e-mail, cell phone text messaging, and on-line gaming (Anstey, 2002; Cruikshank, 2004; Ware & Warschauer, 2005). Scholars argue that the visual is returning to the page (Kress, 2003), that the page is losing ground to the screen (Snyder, 1997), and that new venues for writing, including e-mail, texting, and blogging, ask for new composing skills and mindsets. As an indicator of the rate of change in this entity we call writing, the words *texting* and *blogging*, not yet in our word processor's dictionary, appear today on our screens underscored with squiggly red lines. These words and the writing

activities they represent are more recent than the latest iteration of the program's dictionary.

Teachers, schools, and colleges find themselves challenged to respond to this rapidly changing environment in responsible and constructive ways. Political rhetoric has, since the Clinton-Gore Administration, carried the assumption that simply bringing technology into our classrooms will help keep the United States competitive in the global economy (Selfe, 1999). Further, schools, colleges, parents, and students have been subjected to heavy duty marketing from hardware and software suppliers—beginning with the Apples in the Schools campaign in the 1980s, and continuing today with manufacturers of tablet PCs and designers of software that claims to grade and respond to student writing. Parents and students are regularly told that computer literacy is a prerequisite to success in the new economy. Responding to the voices of scholars and politicians and to marketing pressures from the technology industry, state and federal Departments of Education, and professional societies such as the College Composition and Communication Conference and the National Council of Teachers of English, have adopted statements that urge schools and colleges to embrace technology in their teaching.

Writing teachers have inevitably felt pressured to change from the forces we have listed above. But more important, teachers, and in particular those who have contributed to this book, have felt the world of writing shifting under them and have wanted to account for this change in their teaching. These teachers are embracing technology in their teaching, to support not only the learning of traditional essay texts but also new electronic text types—what Colin Lankshear and Michele Knobel (2006) call "post-typographic forms of texts" (p. 23). These new electronic texts—a Web site with words and images, blogs where multiple readers and writers contribute—challenge our basic notion of written texts as linear, verbal, single-authored texts.

At the same time that new forms of writing—and thus literacy—are emerging in our culture and in our classrooms, forces of assessment and standardization exert a counter-pressure, asking us to prepare students to produce conventional, formulaic print texts in scripted ways. Paradoxically, technology is also being harnessed for these purposes by educational publishers and testing companies, taking the form of machine-scoring and responding to student writing. So it is that technology seems to be leading us forward to new forms of writing, but, as used by standardized testing programs, backward to the five-paragraph theme.

Teachers are caught in this conflict, for their students' sake wanting to respond to the changes taking place in this thing we call writing, and at the same time wanting their students to do well in the 19th-century school essay called for on standardized tests. All of the contributors to this book have in some degree resolved this conflict, as they describe an e-writing project they have devel-

oped and taught, the learning objectives they had for this project, and their criteria for assessing the writing that resulted from the project. Taken together, the chapters support grounded generalizations about how our understandings of writing are changing and how this broader conception of writing—and the skills it draws on—aligns, or does not align, with current standardized testing. Equally, if not more important, the collection provides guidance and support to teachers generally, giving them models of teachers who have, despite pressures to do otherwise, engaged the new writing in their classrooms, identifying learning objectives and assessment criteria for their e-writing projects.

EVOLUTION OF COMPUTERS AND OUR (RELATED) UNDERSTANDINGS OF WRITING

The changes in this entity we call writing have, since the early 1980s, presented teachers with both challenges and opportunities.

Introduction of Computers to the Classroom

Writing teachers' first serious connection with emerging technologies dates from the early 1980s introduction of the microcomputer. With the Apple II and then the IBM PC, everyday writers who could afford the $2,000 price tag (and another $400 for the dot-matrix printer) could for the first time compose on the computer—a task that had been previously possible but difficult, requiring access to a mainframe computer, stacks of punch cards, and long waits at the print window. With the microcomputer, a writer could compose on-screen and easily revise without retyping the full draft. Not surprisingly, writing teachers at this time saw the microcomputer as a writer's tool, a really fancy typewriter that enabled writers to produce the traditional print forms with greater efficiency. In contrast to educators like Seymour Papert (1980), who saw computers more broadly as machines to think with, writing teachers initially saw the computer narrowly—as a writer's aid.

This focus on print text, which now seems so retrograde, was inevitable, given the writing process pedagogy then widely in place, with its focus on the single writer and on the production of text, and given that the microcomputer was at that point a limited, stand-alone machine. Word processing programs used (and still use) print-technology vocabularies, including such words as *page* and *indent* and *margin*, much as the early automobile was called the horseless carriage. The focus of teachers and researchers was on the relative virtues of early word-processing programs like *Bank Street Writer* and *Applewriter*, and later, on program suites like William Wresch's *Writer's Helper* that included, as future, more complex word processing programs would, grammar- and

spelling-checkers. Typically in schools stand-alone computers were set up in labs—where students were scheduled, often for math courses or computer literacy sessions. In these labs, keyboarding, as an aspect of computer literacy, was taught by the teachers who formerly had taught typing or business communication.

Moving Beyond Print-Text

By the late 1980s it became clear to many that even though the new technology was good at producing traditional print texts, the text that it produced was different in subtle but important ways. Given the possibility of infinite and rapid revision, the text could seem always unfinished, always awaiting closure. And given the writer's new ability to change fonts and type sizes, the page increasingly was becoming visual, something to look at, as well as something transparent, to read through, for meaning (Lanham, 1989, p. 265).

Advances in processing speed and memory drove software development that made these changes widely evident. The first commercially available desktop publishing program, Aldus Pagemaker for the Macintosh, was introduced in 1985, as was the HP LaserWriter, the first PostScript printer. Expensive at first, these technologies gradually moved into homes and schools, making page design—not just type font and sizes, but the introduction of complex graphics and photographs—an aspect of the composing process and expanding our everyday sense of what writing might include.

Kress and Van Leeuwen (1996) were among the most cogent of those who argued that we must include the visual in our understanding of writing. Their *Reading Images: Grammar of Visual Design* brought the term "multimodal text" into popular use. Less than a decade later, in *Literacy in the New Media Age* (2003) Kress could invoke new technologies as an ally. In the opening paragraph of his book he argued, "It is no longer possible to think about literacy in isolation from a vast array of social, technological and economic factors" (p. 1). Of these factors he highlighted two: "the broad move from the now centuries-long dominance of writing to the new dominance of the image and, on the other hand, the move from the dominance of the medium of the book to the dominance of the medium of the screen." Kress (1999, 2003) maintains that in this screen-based and visual present we need to think of student writers not as producers of print text but as designers, composers who are able to use all available resources to make the meanings they need to make.

Writing as a Social Process

As the move from page to screen expanded our sense of what writing included, advances in communications technologies began to make it possible

for teachers to work with the new writing as a social, as well as an individual, process. Packet-switching protocols developed in the early 1980s made it possible to connect multiple computers into a network; and as computing power continued to increase, classroom-based chat programs, running on local area networks, became a feature of some computer-equipped writing classrooms and labs. In a parallel development, home and classroom computers could be connected by telephone lines to wide area networks such as Bitnet; and on these networks electronic mail, or e-mail, became available as a form of written communication.

By the late 1980s, writing teachers were aware of the potential of networks for their student writers. As Judy Rickard, a primary teacher in Halifax, Nova Scotia, said, "Computers are useful for writing but something is still missing. Writing for classmates is a first step toward making writing a collaborative enterprise. Electronic mail takes writing even further. It brings our students' voices to the rest of the world." (Newman, 1989, p. 797). But this writing that Rickard referred to was not quite the same as page-based, classroom writing. It was quick and immediate, composed online, on the fly, without revision. Linguists had argued in the early days of electronic mail and bulletin boards that online writing was syntactically different from paper-based writing, an "electronic English" (Collot & Belmore, 1996). Somewhat later, scholars in composition studies called for a new rhetoric of e-mail (Hawisher & Moran, 1997).

As school computer labs began to be networked, and chat programs such as Interchange were designed for these networked classrooms, oral in-class discussions moved online, as students could now write directly to one another. This was yet another new form of writing: the written discussion. Writing teachers saw the online discussion as an advantage, because what had been oral was now written: there was more writing going on. Further, at the end of the chat session there was a transcript of the discussion, which itself could become the subject of further analysis and discussion. It was hoped that chat programs would erase the differences among a diverse group of students; that the voices of women and minority students, or students who were for one reason or another reluctant to speak out in class, would make themselves heard online in ways that they did not in face-to-face classroom discussions (Faigley, 1992).

Given that this new writing was social, not the relatively private writing composed and revised on a word processor, writing teachers confronted for the first time issues of online behavior. Online exchanges called *flaming*, or the use of hurtful language, took place—not in the relative privacy of the traditional student-teacher exchange of writing—but now in the full public forum enabled by the classroom network. The generally accepted explanation for this online behavior was twofold: that online writing was quick and immediate,

and that online writing took place absent the usual social constraints imposed by the physical presence of the listener in face-to-face discussions.

Using the Hyperlink

A final development that changed writing forever was the hyperlink, first commercially available in 1987 as Apple's Hypercard, and later to become the warp and weft of the World Wide Web. The hyperlink radically changed text from linear to linked, distributed—what scholars and practitioners termed *rhizomatic*—that is, like a grass that propagates by its spreading roots, a shallow but broad, vast, and connected single organism. The hyperlink made it possible for the reader/viewer to go from one page or screen to another with the click of a mouse. Whereas the writer of print text could lead the reader along a line from the first sentence to the last, the writer of hypertext/hypermedia lost this control. The reader of print text had always been able to skip and scan. Extreme forms of print text, like Cortazar's (1967) *Hopscotch* or Sterne's (1760–1767) *Tristram Shandy*, had pushed at the limits of the printed page. But even in these experimental novels, the text was still there, linear, with a beginning and an end. With the advent of the hyperlink, the writer wrote with no certain knowledge of where the reader had been or where the reader would go next. Indeed, different readers would now almost certainly create their own paths through the hypertext/hypermedia composition. Writing for this linked medium brought new challenges for the writer, who now had to make decisions about not only voice, structure, syntax and vocabulary, but also what in the text to link to what, and for what purposes (Burbules, 1997).

Implications for Writing Classrooms

These changes in writing—the inclusion of the visual and the aural, the immediacy of online written communication, and the ability to link a word, sound, or image to other words, sounds, and images—have become widespread in the past decade as a result of the ever-increasing power of computers and the increasing availability of broadband Internet connections. Richard Lanham argued in 1989 that digitizing would blur the distinctions among the arts, because they now all had "digital equivalency" (p. 274). This blurring of distinctions is happening in homes, libraries, and classrooms, as emerging technologies make multimedia composition widely accessible. Indeed, multimedia is altering the way young people interact with our traditional spheres of literacy, and educators are just now beginning to consider the impact of these developments on their classrooms.

Young people are certainly active participants with technology, as the 2007 report of the Pew Internet and American Life Project, "Teens and Social

Media," amply demonstrates. The Report tells us that "93 percent of teens use the internet"; and, more important for our argument, that "64 percent of online teens ages 12–17 have participated in one or more among a wide range of content-creating activities on the internet" (Lenhart, Macgill, Madden, & Smith, 2007, p. i). According to the report, "39% of online teens share their own artistic creations online," "33% create or work on webpages or blogs," and "26% remix content they find online into their own creations" (p. i). Given these statistics, it is clear that something substantial is happening in the world of our students' literacy.

Teachers, because they are working closely with young people, often see changes taking place in society before the rest of us. Though they may want to adapt their classroom practice to these changes, they may find adaptation difficult because of the nature of the school and classroom or because change is, for all of us, often difficult. Change may be particularly difficult for teachers who are still relative newcomers to the world of multimedia. Lankshear and Knobel (2006) have argued that in reference to posttypographic forms of texts people have one of two mindsets: that of the "insider" and that of the "newcomer" (p. 34). All of us born before 1970 or thereabouts are newcomers, and as such have had to learn to read and compose posttypographic text forms; those of us born after 1970 or thereabouts are insiders, and find posttypographic forms of texts natural. So it is that outside of the classroom, the convergence of audio and video with reading and writing is normal literacy practice for many young people today, as they easily toggle among the various modes. Some teenagers, as the Pew report indicates, even compose with these new tools in mind, adding hyperlinks to connect ideas together in different ways or enhancing written text with moving images and sounds.

Kathleen Blake Yancey (2005) calls this use of the new media "textured literacy": "the ability to comfortably use and combine print, spoken, visual and digital processes in composing a piece of writing" (p. 38). She argues that writing can be improved through implementation of new technology if the technology is complementary to the curriculum. "Writers use digital technologies to write many new kinds of text, such as Web logs, hypertexts, and electronic portfolios. Helping writers develop fluency and competence in a variety of technologies is a key part of teaching writing in this century" (p. 38).

STANDARDS, STANDARDIZATION, AND THE TESTING ESTABLISHMENT

Whether we speak, as Yancey does, of a textured literacy or as Lankshear and Knobel do, of "posttypographic forms of texts" (2006, p. 25), it is clear

that our understanding of what writing is has expanded. And yet state- or federally mandated standardized testing has had the effect of reducing the definition of what good writing entails.

Emphasis on Testing

The current era of accountability and standardized assessment began in the 1970s and has been gaining steam ever since (Gallagher, 2007; Hillocks, 2002). The *Newsweek* article "Why Johnny Can't Write" (Shiels, 1975), is emblematic of the 1970s Back to Basics discourse that used a decline in SAT test scores as one reason for more emphasis on teaching conventions and grammar. In 1983, President Reagan's Commission on Excellence in Education issued its report, *A Nation at Risk*, which decried low educational standards and called for standardized achievement tests as one means to increase rigor and improve education. These accountability provisions were enacted in many states and traced through various presidential initiatives, including those of George H.W. Bush and Bill Clinton, culminating in the *No Child Left Behind* (NCLB) legislation, signed into law in January of 2002.

A U.S. Department of Education (2004) Web site, entitled "Stronger Accountability: Testing for Results" addresses what it identifies as myths about testing, one being that "Testing narrows the curriculum by rewarding test-taking skills." According to the site, "the Reality" is as follows:

> Surely a quality education reaches far beyond the confines of any specific test. But annual testing is important. It establishes benchmarks of student knowledge. Tests keyed to rigorous state academic standards provide a measure of student knowledge and skills. If the academic standards are truly rigorous, student learning will be as well.

A Study of State Writing Assessments

While rigor is important, the content of a test is more important in relation to curricula and student learning. As George Hillocks' (2002) research has shown, high stakes statewide assessments can narrow curricula, depending on the standards they target and the type of literacy privileged by the test design and rubrics. In *The Testing Trap: How State Writing Assessments Control Learning*, Hillocks reports on his study of K–12 statewide assessment programs in five states: Illinois, Kentucky, New York, Oregon, and Texas. These five states provide a range in population, test design, and nature of the stakes for the assessments. For the study, he analyzed mandating legislation, test design, rubrics, and sample papers; he also interviewed state department of education officials as well as teachers and administrators in six school districts in each state: two

large urban districts, two suburban districts (one middle class, one working class), one small town district, and one rural school district.

Hillocks' findings show the most dramatic contrast in test design between Kentucky, on the one hand, and Texas and Illinois on the other. Kentucky's Commonwealth Accountability Testing System (CATS) for writing, using a portfolio, is closest to sound assessment principles and includes the broadest range of writing. Unfortunately, few other states equal Kentucky in this regard. The Kentucky writing assessment includes an on-demand writing assessment and a portfolio writing assessment, with the portfolio carrying more weight than the on-demand writing. The portfolio for each grade level includes four pieces of student-selected writing in a range of genres. For example, for grade four, students are to include one example of reflective, personal, literary, and transactional writing, with at least one coming from a study area other than English language arts. For grade 12, one piece is to be reflective, one to be Personal, Expressive, or Literary Writing; one to be Transactional Writing in a genre of choice, and another Transactional Writing with an analytical or technical focus various authentic genres (forms). At least one piece must come from a content area other than English (Kentucky Department of Education, 2007).

In contrast, the writing assessments for Illinois and Texas are on-demand tests that require either one or two samples of narrative or persuasive writing. For example, the Texas assessment for grade 7 calls for one sample of narrative writing; the exit level assessment calls for one sample of persuasive writing (Texas Education Agency, 2006). In Illinois, the grade eight assessment calls for one narrative composition and one persuasive one (Illinois State Board of Education, 2007).

These assessments, like those of many other states across the country, favor traditional print-based writing. Further, while it seems not to have been the intention of those designing the tests, these tests also tend to elicit formulaic writing. In this regard, it is worth noting that on the Illinois Web site, which includes the scoring rubric and sample essays for persuasive writing, all five of the top-rated essays are five paragraphs long.

For all of these assessments—even Kentucky's—only traditional print-based writings are assessed. Further, for the states that assess only on-demand writing, the universe of writing is reduced even further to one mode at the high school level. The criteria for assessment are frequently variations on the traditional ones of focus, development, organization, and conventions. On the basis of his study of the five states, Hillocks (2002) concludes:

> If state assessments have the following characteristics for expository and persuasive writing, it is predictable that they will engender formulaic writing and the thinking that goes with it: (1) prompts providing a specific topic and subject

>matter with no or highly limited accompanying data, (2) one limited session for writing, and (3) criteria that call only for 'developing ideas' without specifying the nature of development much beyond a request for detail. (p. 201)

Hillocks is describing conditions that obtain in far too many states.

The impact of these K–12 assessments obviously extends to higher education as well as students move from high school into college. Assessments that invite and reward formulaic writing work at cross purposes with efforts to improve articulation between high school and college, and teach rhetorical and composing skills identified as valuable by most high school and college teachers. See, for example, the Council of Writing Program Administrators (2007), Outcomes Statement for First Year Composition. It identifies as outcomes a range of rhetorical skills (including ability to "respond to the needs of different audiences" and "write in several genres") and writing process skills (including ability to "use a variety of technologies to address a range of audiences"). Comments by high school teachers in *What is 'College-Level' Writing?* (Sullivan & Tinberg, 2006) reflect similar values. Higher education is also being pressured to adopt standardized tests for assessment of broad learning outcomes, including for writing. (See, for example, American Association of State Colleges and Universities, 2006; Commission on the Future of Higher Education, 2006; National Center on Education and the Economy, 2006).

Implications for Curriculum

Hillocks' (2002) study documents what we know from myriad sources: tests, particularly when high stakes, drive curriculum. If persuasive writing is what is assessed in a timed writing, then that is what is going to be privileged in instruction, particularly in two situations: when a school has been identified as underperforming, and when teachers do not have adequate education about writing theory and pedagogy. As Hillocks concludes, "Few teachers had the special training in composition and rhetoric that might enable them to conduct a detailed critique of the assessments. Indeed, it is much more common for the state assessment to become the theory of writing upon which teachers base their teaching" (p. 198). In other words, even though state curriculum standards are often more theoretically sound and broad based, it is the high-stakes tests and the limited standards that they define and target that guide practice.

For this reason, state standards regarding technology or media do not carry the weight that the test-targeted writing standards carry. Further, some states do not even include standards for technology. If we add our home state, Massachusetts, to the five states Hillocks studied, only three of these six states have standards related to technology or media: Kentucky, Massachusetts, and

Texas. All three of these include media production or communication, but none use the words writing or composing. The Massachusetts Media Production standard (Massachusetts Department of Education, 2007), however, invokes criteria consistent with criteria for writing, suggesting some connection between the two:

> Students will design and create coherent media productions (audio, video, television, multimedia, Internet, emerging technologies) with a clear controlling idea, adequate detail, and appropriate consideration of audience, purpose, and medium. (p. 96)

Further, this standard is linked explicitly with a writing strand for research, but only the research strand. For the most part, however, these standards are distinct from writing standards, although as we write in 2008, a committee convened by the state Department of Education is recommending that the media standards be integrated with writing, research, and reading standards.

Electronic Assessment of Writing

Ironically, as electronic technologies create new possibilities for writing, educational publishing companies are using technology to teach a reductive construction of writing. Consider three such products that are being marketed for use in elementary through college classrooms: *Criterion*, available from ETS; *Writing RoadMap*, from McGraw-Hill; and *MY Access*, from Vantage Learning. All three use automated scoring programs to assess writing, providing feedback to student writers and assessment scores for teachers and administrators. All are marketed by invoking the language of accountability and large-scale assessment, promising to evaluate students in relation to a benchmark corpus of texts and to provide tracking data for teachers and administrators.

While the three automated scoring programs differ in some features, all focus on traditional print-based essays written with a word processor. Each program operates by providing a bank of essay topics for teachers to use for writing assignments. *Criterion* also enables teachers to create their own prompts, following the model of the prompts in their essay banks. These prompts are similar to those for on-demand writing assessments, tailored to writing from observation without other inquiry or research. Most high school prompts are for expository or persuasive writing. For persuasive writing, the formulaic prompt of arguing for one of two alternatives is favored. These programs are touted for providing speedy and consistent feedback, and, on the basis of testimonials on their Web site, for improving student writing. On the basis of our own review of these programs and that of others (Cheville, 2004; Rothermel, 2006), we know that the automated scoring programs distort the

nature of writing as a human activity, a dialogue between writer and reader, even as they invoke the language of process writing. The holistic feedback these programs give is generic, reading much like scoring rubrics, and thus not tailored to a specific writing. Further, given that a machine program cannot actually read as a person, it responds to what it can count—structure, sentence length, word frequency—and not to rhetorical factors such as voice or to the substantive nature of writing.

Although the scoring rubrics imply that depth of thinking can be assessed, from our experience using one of these programs, *Criterion*, we have found that it identifies not depth and complexity, but length; number but not quality of examples; and traditional, explicitly marked structure but not more complex or implicit structure. It also errs in identification of errors. (Herrington, 2007; Moran & Herrington, 2006). For example, for an essay written for *Criterion* that received a score of 4 initially, we were able to raise the score to the top rating of 6 by providing an additional superficial example, creating five paragraphs instead of the original three, and adding a clearly marked facsimile of a thesis statement. The rubric for a 6 includes the following explanation:

> You have put together a convincing argument. Here are some of the strengths evident in your writing:
> Your essay:
>
> • Looks at the topic from a number of angles and responds to all aspects of what you were asked to do
> • Responds thoughtfully and insightfully to the issues in the topic

Despite the invocation of a human reader, *Criterion*'s e-rater cannot read as a human and is incapable of deciding on whether an essay is "thoughtful" or "insightful." In fact, for an essay such as we entered into the program, it provides a mistaken and misleading judgment, praising a rather limited revision as thoughtful when it did not differ substantially from the 4-rated first draft (Herrington, 2007). In short, *Criterion* and its cousins, *Writing Roadmap* and *MY Access*, reinforce the reductive definition of writing instantiated in most statewide tests of writing.

While there have been few studies of the uses of automated programs for instructional purposes, in his study of schools where all students had laptops, Mark Warschauer (2006) notes that of the 10 schools he studied, three were using *MY Access*. He reports that in those schools, 51% of students agreed that *MY Access* helped improve their writing, as compared to 16% who disagreed and 33% who indicated either "don't know" or "neutral" (pp. 73–74). What is noteworthy, though, is that he observed that students focused on mechanical aspects and tended to ignore "the more generic feedback offered by *MY*

Access on style, organization, and development" (p. 74). Warschauer also reports that automatic evaluation "tended to reinforce formulaic writing as students dropped colloquial language or nontraditional structures to try to get a high score" (p. 74). He concludes, though, that this type of writing is what the schools value, so automated assessment isn't the cause of it. Also of note, he mentions the difficulty of "low-SES students" with poor language skills: "working independently with automated essay feedback was difficult for students who could not comprehend the meaning of the feedback or understand the grammatical terms used" (p. 149).

Integrating Technology and Writing

Fortunately, there are a few voices resisting the use of technology in these limited ways and resisting the focus on standardized assessment. These voices are reflected in the second report of the National Commission on Writing (2006), *Writing and School Reform.* While reinforcing the recommendations of the Commission's first report, *The Neglected* "*R,*" in a number of ways, *Writing and School Reform* differs on key points related to technology and assessment. Some background: The Commission is notable among national education commissions in that it included reasonable representation of teachers, instead of being solely composed of business executives and senior educational administrators. Its first report, *The Neglected* "*R,*" makes a persuasive case that more resources need to be devoted to improving writing and professional development for teachers of writing. For our purposes, two other recommendations are of note: one is that assessment be "fair and authentic" (p. 67). The second regards technology: that "the private sector work with curriculum specialists, assessment experts, and state and local educational agencies to apply emerging technologies to the teaching, development, grading, and assessment of writing" (p. 68). The elaboration for this point focused almost exclusively on assessment, including programs for "technologically based corrections and commentary on students' papers" (p. 69). (The hand of the College Board, which sponsored the Commission, may be evident in this recommendation that favors technology for assessment, given its links to the Educational Testing Service ETS.)

After the publication of *The Neglected* "*R,*" in a move exceptional for national educational commissions, the Commission held hearings across the country at which hundreds testified, most of them elementary through college teachers of writing. According to *Writing and School Reform,* one of the clear messages from those hearings was that assessment has gone awry:

> Standardization and scripting of instruction threaten to undermine writing instruction. (p. 9)

> Existing state standards and assessment systems frequently constrain schools and teachers from best practice in writing. (p. 19)

Further, while the consensus of those testifying supported "fair and authentic assessment," they did not support recommendations that money be invested in developing technologies for grading and assessment. Instead of the first report's heavy emphasis on using technology for assessment and error correction, those testifying supported using technology as a tool for writers and learners. Specifically, this was the reasoning of those testifying:

> *The Neglected "R"* seemed to consider technology largely as a tool for advancing traditional writing and assessment instead of understanding that video and multimedia projects enabled students to find new ways not only to communicate with their audiences but to understand the world around them. (p. 22)

Those testifying also strongly endorsed recommendations in *The Neglected "R"* for more professional development for teachers, not just to deliver curricula but to develop it.

Perhaps the American public is coming to realize the limitations of the current apparatus of standardized assessment as well, and its costs—both financial and educational. According to a national survey, *Learning to Write*, conducted by Belden, Russonello, and Stewart (2007), "by a margin of two to one, the public prefers putting more resources into helping teachers teach writing, rather than putting those resources into testing students to see how well they are learning to write." Those surveyed also recognize the importance of learning to write, as over 80 percent said that students should "learn to write well as a requirement for high school graduation" and believed that writing is important to success in college and success in work, "regardless of what type of job it is."

The teachers in this collection build on the views expressed in *Writing and School Reform*, as they develop curricula that teach students to use new media to compose, communicate with others for a range of purposes, and understand and act in the world around them. In doing so, these teachers help us all understand how teachers and their students can negotiate between two apparently distinct worlds, the world of standardized writing assessments that privilege linear, essayist literacy, and the world of contemporary society where the ability to compose nonlinear, multimodal, and sometimes interactive texts is becoming increasingly valued. More positively, these chapters should help educators address the integration of technology and writing in both practice and in the curriculum standards that guide practice. The teachers who have authored the chapters that follow embody in their practice the words of Sandholtz, Ringstaff, and Dwyer (1997), authors of *Teaching with Technology*.

The benefits of technology integration are best realized when learning is not just the process of transferring facts from one person to another, but when the teacher's goal is to empower students as thinkers and problem solvers. Technology provides an excellent platform—a conceptual environment—where children can collect information in multiple formats and then organize, visualize, link and discover relationships among facts and events. Students can use the same technologies to communicate their ideas to others, to argue and critique their perspectives, to persuade and teach others, and to add greater levels of understanding to their growing knowledge. (p. 176)

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