

The Best of Both

Three modes of literacy learning capitalize on technology's strengths while mitigating its shortcomings.

Margaret Weigel and Howard Gardner

Reading performance among U.S. adolescents and young adults has declined sharply during the last two decades. So has the amount of voluntary reading these groups do. Simultaneously, use of the new digital media is on the rise (National Endowment for the Arts, 2007). The same students who snub traditional literary works and genres now spend an average of four hours a day online—browsing Web sites, playing video games, and text messaging one another (Rideout, Roberts, & Foehr, 2005).

How can schools respond to these troubling trends? The wise educator needs to incorporate the benefits of the new digital media while guarding against their pitfalls, including the threat to literacy levels.

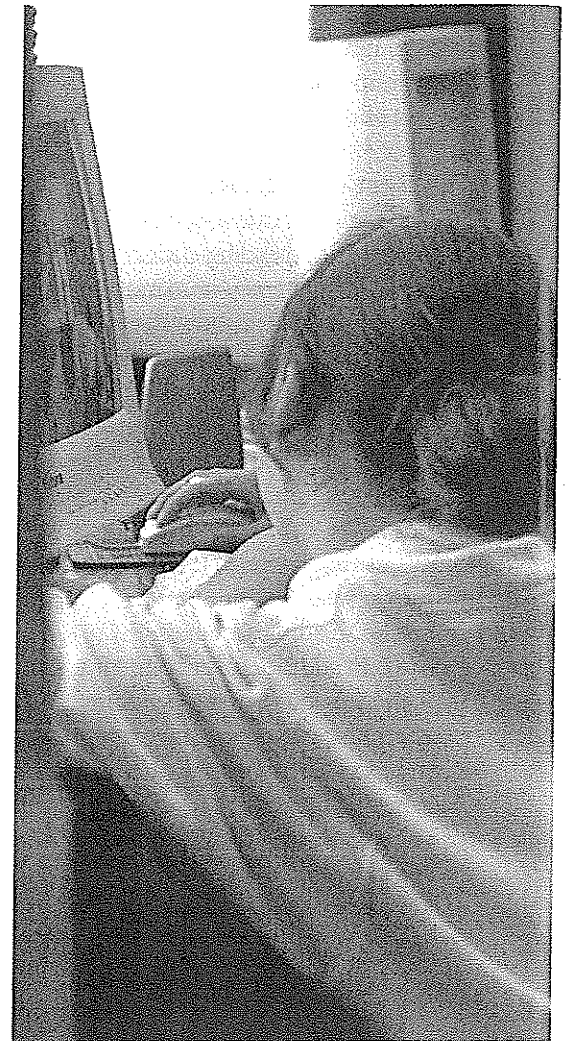
Online Reading versus Offline Reading

Reading online differs from reading offline. For one thing, the content students find online is likely to be dramatically different from offline content. Although newspapers, magazines, research organizations, and academic journals are posting their content on the Web, much of this content requires an online subscription, a password, or paid access through a

member library. Because such content is often not captured and indexed by Google and Yahoo, your students aren't likely to come across many of these professionally produced articles and reports.

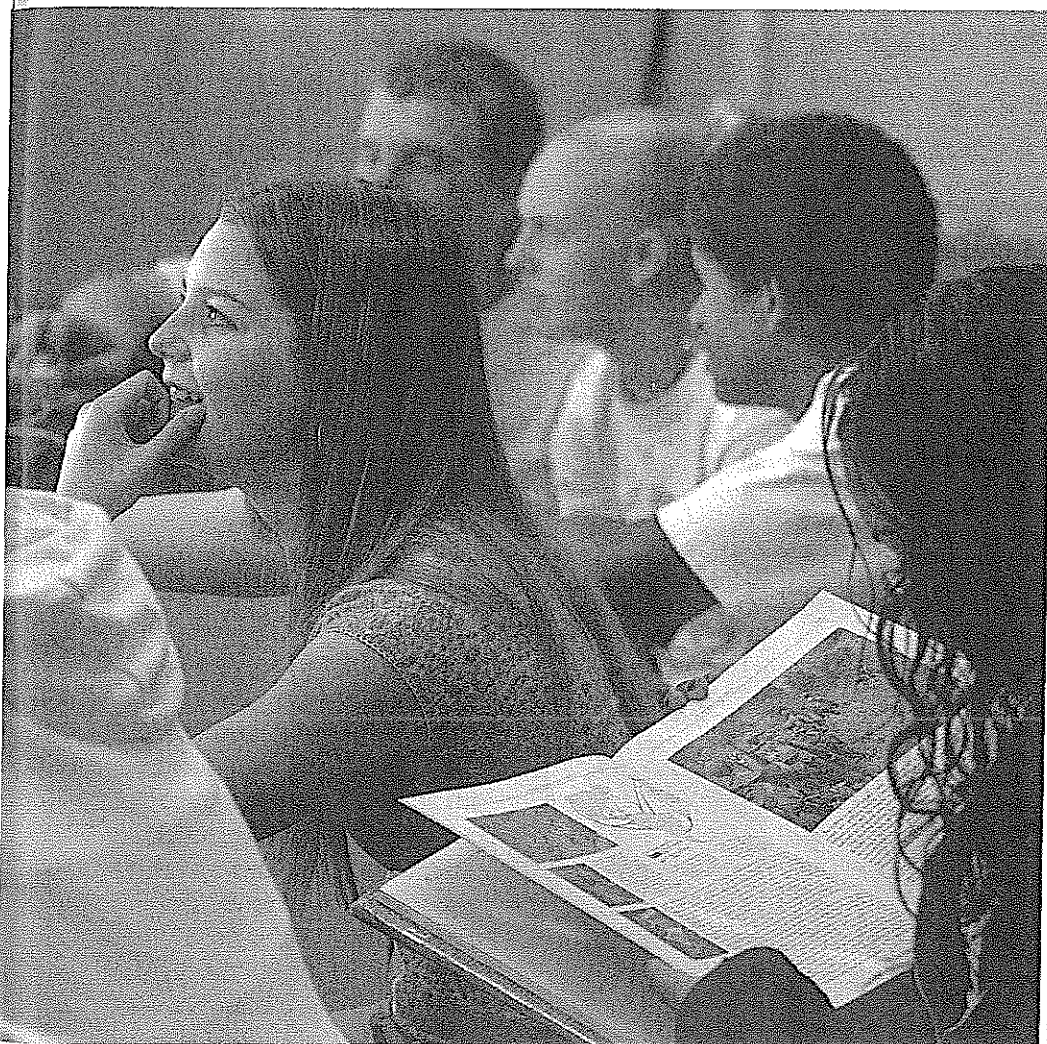
What they *will* find is the more accessible text on sites posted by companies, organizations, or individuals. This material is democratic in origin, written by a range of contributors with different specialties and strengths. Often free of the careful ministrations of editors, online content can be fictitious, lack appropriate citations, be poorly written, and be authored by anyone ranging from Emile Zola to Anonymous. The style of most online text resembles a periodical rather than a book; text is written in short bursts and is read even more quickly (Gioia & Iyengar, 2008). In addition, there is no guarantee that a page you visit today will be at the same online address (or even online at all) tomorrow.

Online content is rarely limited to text on a page. Even the most well-intentioned reader may be tempted by the siren calls of Web links, compelling visuals, buttons, advertisements, and other enticements that garnish most Web pages. This graphic seduction can lead the reader down two radically different paths. On one hand, the opportunity to explore and switch



topics quickly and easily—combined with the 24/7 access to a wide range of useful information—can facilitate active, engaged learning. On the other hand, the same feature can tempt readers to hop from point to point, distracted from the original task, creating what Seymour Papert (1994) called the *grasshopper mind*. Guiding this peripatetic mind may be the primary challenge of educators in the digital era. Here, we look at three

Literacies



thoughtful researcher can find what he or she needs online and can easily pursue individual interests and new ideas.

The writing process has been transformed as well. Index cards, piles of notes, and multiple handwritten drafts have given way to word processing programs that enable writers to merge notes, drafts, and outlines seamlessly; edit as they go; retrieve deleted

Digital tools have transformed the way we do research and write.

passages; reorder entire paragraphs; change selected words; incorporate tables and visual images to back up one's point; and even customize formats and self-publish. Edited drafts are no longer unintelligible, ink-stained messes. Put simply, this increased ability to write and edit fluently has freed students to focus more on expressing what they want to say.

This increased personal freedom does come with pitfalls, however. Educators need to be on the lookout for papers whose professional appearance masks poor writing and shoddy research. Further, the combination of easily accessible online text with the ability to manipulate text and graphics digitally can lead students to lift sentences, paragraphs, or even entire papers without proper attribution.

powerful modes of literacy learning that can capitalize on technology's strengths while mitigating its shortcomings.

Constructivist Learning

The constructivist approach to literacy assumes that students are naturally motivated to read and write; the role of schooling is to provide them with the tools and guidance they need to acquire literacy skills in a developmentally

appropriate, individually meaningful way. The new digital media can help to translate some of the goals of this student-driven approach into reality.

For example, digital tools have already transformed the way that we conduct research and write and, accordingly, the way we think about composing and editing text. A generation ago, research papers involved frequent trips to the library; now, a

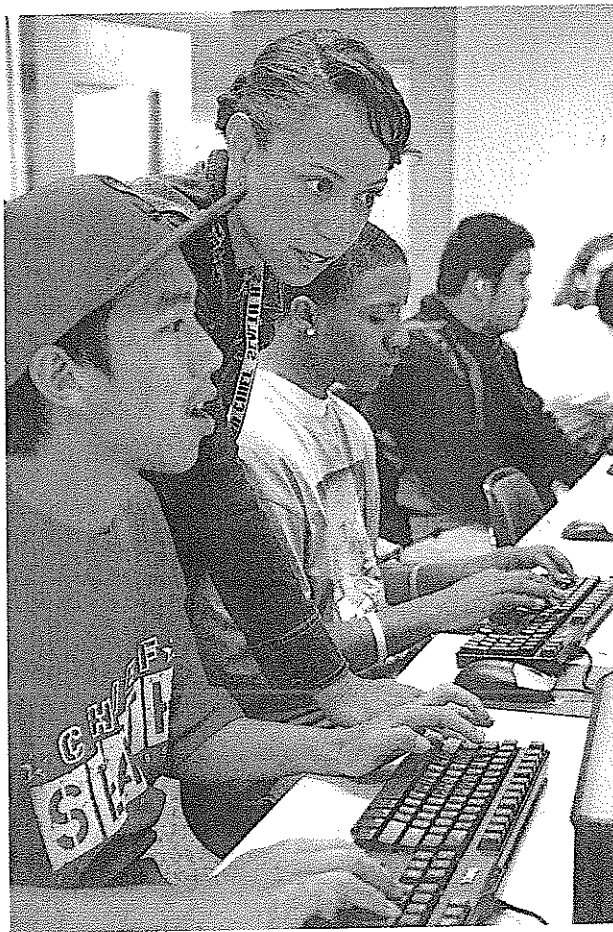
Our research suggests that the majority of students are honest and that those who resort to plagiarism either feel pressured by other commitments or consider the assignment of little interest to them. The best way to guard against dishonest practices is to assign interesting work, examine interim drafts, allow a reasonable amount of time for completion, and encourage students' natural curiosity to drive the process.

Informal Learning

Until recently, whether at home or in school, students' informal learning was generally limited to information gleaned through television, books, and magazines. Now students can pursue a myriad of personal interests through digital media. For virtually any interest you can imagine, you can probably find a Web site. A sports fan, for instance, can find copious information on his or her favorite team or player on ESPN.com. A fan of the TV show *Heroes* can visit its official Web site (www.nbc.com/Heroes) to watch episodes or read original fan fiction based on the program's characters and storylines. An adolescent helping to plan a family trip to China can find information on that country's history, people, holidays, climate, cuisines, etiquette, and much more at WikiTravel (<http://wikitravel.org/en/China>). The Web can be a rich resource for following your passions.

Teachers can use the new media to incorporate students' interests into the formal curriculum, making learning more interesting, personal, and relevant. For instance, educator Donna Alvermann (2001) describes how she capitalized on her student Ned's passion for the rap group Goodie Mob by encouraging him to start his own Web site on

the group. Ned had consistently struggled with reading and writing assignments, but his realization that other Goodie Mob fans would read and comment on his online writing motivated him to expand his literacy activities. He read articles about the group members both online and offline to



ensure accuracy in his Web site content, he reflected on and analyzed their lyrics, and he wrote letters to the rappers themselves.

The potential pitfalls of such an approach include the challenge of keeping students focused on a given learning task. When they are working independently online, students may gravitate toward inappropriate or irrelevant content. As with any instructional approach that empowers students, educators need to be comfortable relinquishing a measure of control. This

teaching strategy benefits from smaller class sizes as well as peer mentors, classroom aides, or technology support staff to assist students who become frustrated or distracted.

It can also be difficult to contextualize students' extracurricular interests within state curricular standards. Educators should ensure that external interests imported into the classroom setting are both developmentally and pedagogically suitable, and that they are not too idiosyncratic. Alvermann does not mention Ned's long-term progress in developing literacy skills. Did his engagement with written texts drop off again after he moved on from his rap group Web site, or was he turned on to literacy activities more generally?

Social Learning

New digital media have a powerful ability to link students across time and space, capitalizing on their natural desire to socialize with peers. Online social learning experiences can engage students and expose them to new individuals and ideas. Wikis are one popular way to connect students with their classmates—or with other classrooms from around the block or around the globe.

Jimmy Wales, one of the founders of Wikipedia, claims that wikis help users cultivate "writing skills and social skills by learning about group consensus and compromise—all the virtues needed to be a reasonable and productive member of society" (Oatman, 2005, p. 54).

An example is the award-winning Flat Classroom Project wiki (<http://flatclassroomproject.wikispaces.com>), which enables students from around the world to study and discuss topics related to Thomas Friedman's best-selling book *The World Is Flat* (Farrar, Straus, and

Giroux, 2005). Participating schools hail from all parts of the United States, as well as from Australia, China, Austria, and Qatar. During each cycle of the Flat Classroom Project, student teams in different countries partner to create a thematic wiki page on a topic related to the book; they share their completed projects with their fellow participants online. In addition to learning about globalization, students glean larger lessons about differences among cultures from working with fellow students who may hold different viewpoints and exhibit different strategies for accomplishing their task.

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Collaboration can be difficult to sustain, however. Online communications have their own set of challenges that differ from those involved in face-to-face or telephone interactions. Without the markers of facial expressions, voice, or body language, even innocent exchanges online can be misread and misinterpreted, which sometimes leads to serious misunderstandings (Walther & Bazarova, 2007). Breakdowns in any link of the chain of technology—computer terminals, Internet connection, financing—can quickly derail an online collaboration if there is no backup plan in place. And finally, online groups of garrulous adolescents can devolve into purely social collectives.

The wise educator will allow participants adequate opportunities to get acquainted with their colleagues, preferably in an offline setting or through real-time multimedia contact. And an on-site technical specialist who can troubleshoot any problems that might arise is an invaluable asset as one embarks on

activities that involve computers and the Internet.

Moving Forward into the Digital Classroom

If we looked into a classroom using the new digital media effectively, what might we see? In one typical classroom, students are working on a series of text-based and multimedia materials centered on their neighborhood's history. They have interviewed some of the neighborhood's older residents in a local nursing home, uploaded the interviews to the project's online wiki, and converted the audio recordings of the

interviews into downloadable podcasts available to the general public. With the help of their teacher and school administrators, the students have contacted select school alumni for Web-based text interviews as well.

The variety of tasks enables everyone to participate in a facet of the project they find particularly interesting; the range of roles also acknowledges different variants of literacy, including visual literacy and interpersonal communication. Through this activity, the students are honing their writing and interviewing skills and gaining a broader understanding of their community. They are not simply reading or repeating stories; they are constructing their community's histories and locating their place within such histories.

Through activities like this, the new digital media offer students powerful incentives to engage with material. But much depends on how educators employ the Web's breadth of content to engage students' interests.

Using technology to teach literacy

requires several leaps of faith by educators—faith in their students, faith in themselves, and faith that they will have support from their administration when needed. Assuming that these leaps land on reasonably firm ground, the new digital media's affordability, ease of access, and breadth and depth of compelling content provide powerful resources that educators have at their disposal in today's classroom. ■

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