USING DIGITAL TECHNOLOGY TO ENHANCE CREATIVITY IN READING AND WRITING

Theme:
How can technology enhance the creative learning opportunities?

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ABSTRACT
The latest tools of interest in new media that our students often use, the iPods, video cameras, cell phones, laptops, Internet, and all the associated gadgetry, are also superb tools for rethinking our approaches to classroom learning. As classroom educators, we need to move beyond the notions of simple literacy in reading and writing to help students mature into a condition of empowerment and engagement of the new media for creative learning. These latest technologies can help students and faculty alike analyze and construct elements of narrative, create metaphoric perspectives, build layered and non-linear stories, and help both students and faculty begin to understand new reading behaviors. In addition, these new technologies encourage collaborative learning spaces that cross boundaries between the traditional and the new media. This presentation will explore the use of digital technology in the classroom to enhance creativity in reading and writing.
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INTRODUCTION
A recent article in the *Economist* reports that by a conservative estimate Google is digitizing at least 10 million books a year, and already the number of titles in existence is reported to be about 65 million books. Google is not alone in this endeavor; Amazon, Microsoft, Yahoo!, and The Internet Archive as well as a number of corporate publishers are all scanning and uploading books online at record rates, with the intent that all public-domain texts and videos become digitally available to the reading public (Pudles 2007). This raises some very important questions for educators: how does this affect the future of reading and writing? Will reading and writing habits change? And how should the classroom of the future, or even of the present, respond to this unprecedented transformation in the way that the printed page is consumed and/or created?

Digital technology has been in higher education classrooms about as long as the personal computer has been in the public domain. But beyond the scope of basic word processing and Internet access (with the considerable effects these technologies have spawned in research, reading and writing projects) are further technologies generated by the abundance of new media, including not only text and hypertext, but also voice, music, graphics, photos, animation and video. Recent research on the effects of the new media in the classroom suggests that these tools greatly encourage active and engaged learning among today’s students. The contributions of the new technologies have been shown to stimulate skills such as reasoning and problem solving abilities, as well as helping students learn how to learn, and how to become creative (Grégoire 1996). In fact, the new media technologies appear to greatly expand the range of students’ learning experiences in the classroom.

As the new digital technologies are becoming more readily available and user-friendly, they have the potential to contribute to classroom learning in ways that we have perhaps not yet imagined. By changing the way information is processed and used, new media technologies are proving themselves capable of making reading and writing more relevant to the lives of students, and thus more readily integrated into their learning experiences. Such diverse factors as greater student motivation, enhanced student interest, broader cooperation among students, and an increased number of relationships among various pieces of knowledge or data consumed by students are among the lead contributions of new media technologies (Grégoire 1996). Surely then, it is incumbent upon both faculty and administrative sectors in higher education to investigate more closely the challenges and rewards that these new digital technologies afford.
RECENT MODELS OF CREATIVE LEARNING
What is creative learning? Any learning that gives students more control over their learning processes, inviting them to construct and invent their own learning calls upon the basic principles of “creative learning.” In the book, *The Learner-Centered Classroom and School: Strategies for Increasing Student Motivation and Achievement*, McCombs and Whistler assert that learning becomes more meaningful when students themselves are “actively engaged in creating, understanding and connecting to knowledge,” and when they feel they have a “real stake in their own learning” (McCombs and Whistler 1997). Classroom teachers at all levels of education will attest to the fact that when students explore, experiment and discover on their own they have a higher motivation to learn.

The fact that we learn by doing should be no surprise to any of us. While Howard Gardner has provided educators with the taxonomy and tools to understand the variety of learning styles that human beings are capable of, most parents and learners alike readily recognize that student learning advances more willingly with hands-on activities. Because learning in a constructive process, students who are engaged in learning by doing become better at posing their own questions. They more eagerly engage in the observing, listening, discussing and reading of research about their task-at-hand, and become more personally involved when the learning is hands-on. Questions about their level of understanding of the task, and about gaps in their understanding are routine, rather than the common fear exhibited by students to share their lack of knowledge in the lecture hall. In fact, when students become co-investigators in their own learning, their interests and questions fuel the learning process, causing them to examine the discipline with more depth and complexity than traditional methods have ever been able to elicit from them.

TECHNOLOGIES THAT SUPPORT STUDENTS' READING DEVELOPMENT
New media technology is pushing literacy instruction beyond its print-based tradition to include online and electronic texts as well as multimedia texts. While some educators suggest caution in the use of technology to promote reading development, several new media technologies available do seem to promote an interest in reading. For example, the use of audiobooks in class with “struggling, reluctant, or second-language learners” has been shown to be a powerful tool that allows students to read texts above their actual reading level. With older students who may still read at a beginner level, this provides an important means for advancing reading (Beers 35).

Certainly the hearing of texts read aloud can improve comprehension if only because of the added dimension of another sense perception engaged in the learning process. The use of audio books in the classroom has definitely raised my students’ interest in reading, and when used in conjunction with written texts, the level of engagement with the reading process is markedly increased. I find that some texts in fact are a struggle for students without the oral component. The aural component of the works of writers like Jack Kerouac, Ezra Pound, Martin Luther King, Allen Ginsberg, Gertrude Stein, Saul Williams, Amiri Baraka, and Maya Angelou, to name just a few, increases my students’ reading comprehension significantly. In fact, some of these readings I would not attempt in class anymore without the audio component to supplement the written word.
The effect of the added media content shows up in student responses to their reading, including creative imitations, both oral and written, as well as reflective feedback. One such student response to the reading of the novel *Girl, Interrupted* by Susanna Kaysen, came in the form of a multimedia story that chronicled her own struggle with a similar event in her life which left her unable to speak for a span of six weeks, and recounted in moving detail the effect a story can have on the reader (Briggs, quiktime movie).

In addition to auditory texts, e-books and online texts often provide a visual component with the material, frequently incorporating textual enhancements such as background information on ideas and concepts, or definitions of words, along with images and illustrations to enhance the reading process. Online texts are also often equipped with hypermedia—links to text, data, graphics, audio, or video, all of which actively and interactively engage the student in the reading process. While a number of research projects demonstrate that hypermedia software has “positive effects on student learning and comprehension” (Anderson-Inman & Horney 32), my own experience in the classroom suggests that the improvement of student comprehension of text with the use of hypermedia may be related to the ability of the individual reader to control the direction and sequence of information gathered.

From a different perspective, some problems generated from the reading of electronic texts occur because “reading a screen can be slower and more fatiguing, sometimes less accurate and the reader is more subject to information overload” (Healy 152). Studies have indicated that comprehension after reading from a screen is poorer than when the same information is read from a printed text (152).

TECHNOLOGIES THAT SUPPORT STUDENTS’ WRITING DEVELOPMENT

For the generation of students coming of age today, computers have been creating opportunities for writing and collaborating for much of their educational life. While the use of word processing has allowed students to write and edit their work more easily, and has added tools such as spell checker into their writing routine, there is no evidence that word processing by itself improves student writing. While students perhaps spend more time revising than in the past, and show improved word choice (Lehr 1995), research and classroom experience both demonstrate that the teacher still has a decisive role in guiding the writing process, providing feedback and encouraging revision (Reinking 1996).

Besides text-based writing and the word processing tools available, new media technology encourages students to integrate both oral and visual multimedia in their work. Students may now choose to insert images, sounds, and video alongside their written texts to create complex, multilayered compositions. In my writing classes, students gravitate to the new media approaches to writing. Assignments that include the use of iPods and video cams as well as hypermedia to punctuate and/or elucidate the writing process are favorites.

One particular classroom experience that made use of the iPod in a spontaneous writing situation has become a high point of my time as a teacher. Students had been directed to
bring their own poems to workshop in class, and one student had written four or five very powerful lines that began with the invective “Speak to my soul.” While the lines were themselves compelling, the poem was underdeveloped. In talking about it, students in class decided they each wanted to write a line that began with the word “speak” to contribute to the piece, and we recorded their lines with an iPod along with the original author’s lines. We then moved the now collaborative piece to iMovie, and added some video footage of graffiti, and GarageBand riffs over it to create a remarkably satisfying spontaneous class piece of writing (Self, quiktime movie).

Another classroom writing experiment occurred when two of the shyer students in class wanted to work together to produce a poem, but did not want to speak the piece out loud. Instead, they created a video in which they performed the poem visually, and layered the written text over their performance, adding a musical layer to the whole. The effect of their collaborative piece bolstered their writing self-confidence noticeably, and increased their desire to experiment and discover more by writing and working with the multimedia mode again. They had learned an effective way of taking control of their own learning process through the use of new media technology (Rinck, quiktime movie).

A third “writing” piece that a student in one of my classes produced through the use of new media technology came as a response to the Walt Whitman habit of writing his poems by way of lists. This student created his own list poem through visual means, showing that the student’s life, needs and interests were all actively engaged in the writing process through the use of new media (Chatel, quiktime movie).

One of the more daring of student experiments with new media in my writing class was collaboration by two students who decided to “write” an artist’s manifesto on each other’s bodies, recording it by video. The end product of their writing experiment was a moving piece of work in which they made their decision about what they would learn and how, and their knowledge and skills were greatly expanded because of it. The piece they produced had a racy edge to it, which they delighted in, and at the same time they were obviously engaged with the research it took to articulate the concepts they wanted to in this piece (Manifesto, quiktime movie).

RATIONALE FOR IMPLEMENTING A NEW MEDIA APPROACH TO LEARNING
New media technology helps students take responsibility for their own work and usually leads to significantly more writing. Bringing together multiple forms of media likewise expands the range of learning experiences for students, allowing them to explore the relations among ideas and thus experience a more connected form of learning. Because the new media technologies are interactive, they are conducive to active, engaged learning; students can choose what to see and do, and they have media to record and extend what they learn.

LESSONS LEARNED AND ADVICE OFFERED
Integration of new media technology into education:
- Gives student more control over their own learning processes
• Increases collaboration among students
• Increases interest in, and time spent, writing
• Improves self-confidence
• Enhances classroom performance
• Increases students’ inquiry-based learning

New media necessitates that students have the ability to communicate competently in all media forms—print and electronic—as well as learn how to access, understand, analyze and evaluate the images, words, and sounds of our contemporary culture. As classroom educators, we can no longer regard literacy instruction as limited to the traditional notions of reading and writing. We must expand our students’ knowledge and skill bases to include computer as well as digital literacy, plus information as well as media literacy. By changing the way that information is absorbed, processed, and used, the new media technologies influence how people read, write, listen, and communicate with one another. In order to help develop both critical and creative thinking skills in our students, our goal as educators needs to include helping them discern meaning from a range of multimedia, visual and aural, as well as the written text.

CONCLUSION
The potential inherent in using new media technologies to enhance reading and writing creativity in the classroom are just beginning to be explored. With the use of new media, students without a doubt engage in a more integrated process of learning. The new media technologies bring excitement into the classroom, in addition to demanding students be responsible for their own learning, and, and the new media technologies increase the probability of student collaboration. By using new media in the classroom, students work on projects that are meaningful to them in order to explore, discover, and learn. They thus become actively engaged in, and personally responsible for their own learning processes.
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