

Bowman, C.A. (2000). Infusing technology-based instructional frameworks in the methods courses: A response to Pope and Golub. *Contemporary Issues in Technology and Teacher Education*, 1(1), 98-101.

Infusing Technology-Based Instructional Frameworks in the Methods Courses: A Response to Pope and Golub

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As national and state standards require teachers and practicing classroom teachers to incorporate technology into teaching, methods courses in English language arts as well as all content areas of teacher education must be redesigned to infuse technology into all aspects of lesson design, instruction, and assessment. Carol Pope and Jeff Golub have pointed out the importance of incorporating technology into teacher education programs in meaningful and professional ways. Technology has the ability to enhance student learning and meet the needs of diverse learners, and preservice teachers can utilize this technology for research, simulation, data collection, analysis, course preparation, and professional growth. However, preservice teachers need guidance and support to make important connections between course material and technology applications. This cannot be accomplished through isolated technology experiences or without ongoing discussion, modeling, and evaluation. Teacher educators need to support students as they tackle content and pedagogical knowledge and the mandates for computer-based instructional strategies.

When technology courses became required for preservice teachers, I was hopeful that these future teachers would revitalize classrooms across the country with their knowledge and expertise. However, during prepracticum observations, I failed to see a single English language arts preservice teacher incorporating technology into their planning, teaching, or assessment. The following semester I gave students a survey to determine their knowledge and comfort with technology before placing them in field experiences. Each of the 32 students responded that they were able to navigate the Internet, create Web pages, send and receive e-mail messages, and create PowerPoint presentations. I placed each of the students in schools with access to technology and asked them to "focus on technology as a literacy tool." When I observed these preservice teachers in area classrooms, I still did not see a single example of the infusion of technology in context. During mid-term conferences, I questioned each preservice teacher in-depth about why they ignored the opportunities to utilize the available technology in their teaching. Their responses, grouped into the following categories, have forever changed the way I teach English methods courses.

- Inappropriate "fit" of technology with the content. (25%)
- Inability to discern how to use technology with the assignments. (30%)
- Resistance of the cooperating teacher. (15%)
- Unavailability of the computer lab. (10%)
- Unprepared students with computer technology. (5%)
- Fears about classroom management. (15%)

These preservice teachers who taught me how to do a PowerPoint presentation and create a class

listserv needed support and inspiration to see the possibilities for technology in English language arts. But it must be modeled. Technology has the potential to enhance good teaching and engage students more actively with the texts and the writing process as well as the teacher's ability to connect with students. One of the preservice teachers said, "Since kids are excited about computers, technology is a perfect way to motivate students to read and write. I wish I had some knowledge of how to plan a lesson that would meet the standards."

Therefore, on the first day of the methods class, I give each student a disposable camera and a poem. After they read their poem, they are to wander around campus taking pictures of sights that illustrate the poem and capture the emotions the poet evokes. During the next class period each student shares their poem and the pictures they took. The ensuing discussions are provocative, insightful, and compelling. We then discuss how to scan the photos onto a disk to create overheads or PowerPoint presentations to use as a visual in the classroom. This, in turn, leads students to argue over the subtext of the photos and the poems and other strategies for engaging students in reading and writing through technology. They have to see me as a teacher willing to take a risk with the assignment as well as the products created. They must address the issue that technology does not replace good teaching; instead, it opens new horizons for discovery and exploration. The assignment allows for honest discussion of fears concerning classroom management and issues of equity and access.

I then ask each student to bring in a text they plan to teach or, occasionally, a novel that captures the attention of the class. Each student selects ten phrases from the novel that they find significant. As a whole class, together, we then open a blank PowerPoint presentation template. After we enter their phrases into text boxes, the students search for images from the Internet to illustrate the phrases. Some students search for art masterpieces, some search for photographs, and others search for animation and clip art. This allows us to develop an instructional framework that takes students through pre-reading, during reading, and post-reading activities. The beginning slides are designed to motivate the students, activate prior knowledge, and provide a foundation for interacting with the text. The next slides provide students with questions to consider and inferences to make while reading along with journal topics and other reader response activities. The last slides require preservice teachers to provide activities allowing students to make global connections, to extend the text into their lives and apply the information to other material. Students then present their PowerPoint presentations for the class accompanied by a lesson plan that explains how the presentation will be used and how the activities will be evaluated. Often the preservice teachers discover ways to involve their students in the planning of the lessons through this activity. This gives us all an opportunity to suggest ideas, ask questions, and steal great teaching ideas. Once the students feel comfortable finding visuals from the Internet or scanning photos onto a disk, importing the photos for their presentations, we move on to developing WebQuests, an interactive computer-based activity developed by Bernie Dodge and Tom March (<http://edweb.sdsu.edu/webquest/webquest.html>). The planning that goes into the creation of a WebQuest mirrors that of writing an exciting and innovative lesson plan, enabling students to incorporate technology into their lesson and not simply adding it on to an existing lesson. The task allows students to give students roles, creative activities, and unique assignments designed to stretch the students and enhance understanding of the text. The anonymity of the computer brings out the creativity and personality of each preservice teacher as well as their students as they select appropriate backgrounds, visual effects, and Internet links. One of the most effective components of the WebQuest is that it requires the teacher to check each site before students use it as a resource, which saves time in the classroom, insures the appropriateness of each site, and provides practice in evaluating Web sites. As the students begin investigating sites, they develop new ideas for tasks and roles for the students. This spiral

planning promotes use of the multiple intelligences and resources beyond the text. Students learn to create hyperlinks and build Web pages, helping them develop other activities and resources for their students. The WebQuest promotes collaborative and team activities and enhances the variety of strategies preservice teachers employ in their planning.

WebQuests substantively integrate technology into the classroom and can invigorate a curriculum and enliven a class. With careful planning, WebQuests can allow both students and teachers to be creative and productive, using this powerful medium to spark the imagination, solve problems, and promote discussion about important issues. A WebQuest includes the following building blocks, which mirror the components of a written daily lesson plan.

Introduction—The purpose of the Introduction section of a WebQuest is to orient the learner to what is coming, motivate interest, and arouse curiosity in the learner through a variety of means.

Task(s)—The Task block in a WebQuest is a description of what the learner will have done at the end of the exercise. It can be a product, like a HyperStudio stack or PowerPoint presentation, or it might be a verbal or writing activity, such as being able to explain a specific topic. It provides goals for the students and teachers to accomplish together.

Process—The Process block in a WebQuest is where the teacher suggests the steps that learners should go through in completing the task. Similar to the methodology portion of a lesson plan, it may include strategies for dividing the task into subtasks, descriptions of roles to be played or perspectives to be taken by each learner.

Resources—The Resources block in a WebQuest is a link to web pages which the teacher has located that will help the learner accomplish the task. The Resources are pre-selected so that learners can focus their attention on the topic rather than surfing aimlessly. Alternative resources such as library materials, films, and interviews within the community are also included.

Evaluation—The Evaluation block suggests strategies to measure results of student learning and performance. Since the learning we're looking for is at the loftier reaches of Bloom's Taxonomy, an evaluation rubric is necessary.

Conclusion—The Conclusion section of a WebQuest provides an opportunity to summarize the experience, to encourage reflection about the process, to extend, and apply what was learned. It offers ideas for further exploration and brings the lesson to closure.

FSU English Education students used these strategies to create an international, award-winning Web site and collaborate with area middle school students to dramatically improve the literacy skills of reluctant readers on standardized exams. For a detailed explanation of the project and the resources created by the students, log on to <http://library.thinkquest.org/50104>. The preservice teachers with this preparation demonstrated more creativity and confidence in the FSU classrooms than those without such preparation and brought technology to life in area classrooms. They incorporated the full range of communication skills, teaching, and technology in purposeful contexts, motivating veteran teachers in the schools to collaborate with them to learn these strategies. Through a variety of relevant learning experiences, all students (those at the university and K-12 students and teachers) can become engaged in problem-solving and critical-thinking skills which requires them to set goals, plan, and assess their own learning. The focus becomes the depth rather than the breadth of learning as students acquire, integrate, and synthesize knowledge. It was incredibly rewarding when one future English teacher wrote:

When I first took this class I was scared of technology. I had no idea how to do anything except type a paper in Microsoft Word. I now know that searching the World Wide Web, creating PowerPoint presentations, and designing WebQuests will be an integral part of my teaching. I plan to teach my students how to create their own Web pages where they can keep an electronic portfolio of their work, allowing them to write for a greater, more global, audience.

Technology creates more purposeful learning as the methods professors learn and model technology in context. The classroom teachers who mentor these preservice teachers need their support to implement the strategies necessary to infuse technology to improve the literacy of all students, to become familiar with methods that will enhance each student's understanding through technology applications. Technology supports content, critical, and creative thinking (Jonassen, 2000). Literacy is not simply a challenge for education; it is a challenge for life. Information literacy requires students to conduct searches, evaluate, and create new ideas. Technology must support student learning, build a community of learners, create strong teaching/learning networks, and provide effective professional development. As future teachers of English language arts, preservice teachers in methods classes need to view technology as a means to collect information, capture ideas, and make meaning where students summarize, synthesize, evaluate, select, reject, listen, read, organize, interpret, talk, write, edit, and revise. Technology is all about integration and finding connections, integrating one skill with others, uniting school with the world, the mind with the body, and the child with the adult one wants to become. You may check our continually developing site at <http://www.fsu.edu/~CandI/ENGLISH/eng.html> for PowerPoints, WebQuests, and other resources created to enhance the teaching of English language arts.

It is almost impossible for teachers to keep up with the rapidly changing field of technology. As Pope and Golub illustrate, students are continually teaching us as we assume the roles of colearners. In partnership with our students we learn many things about ourselves and each other, about taking risks and vulnerability, about technological successes and failures, and most importantly, about the power of English language arts and education.

References

Jonassen, D., (2000). *Computers as mindtools for schools*. Columbus, OH: Merrill.

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