

## **SOURCES AND SUPPORT FOR PRESERVICE ENGLISH TEACHERS AS TECHNOLOGY USERS**

by **Roberta Devlin-Scherer**

Seton Hall University,  
South Orange, New Jersey  
United States

[devlinrb@shu.edu](mailto:devlinrb@shu.edu)

### **Abstract**

This article describes technological applications (Inspiration Software, Puzzles, Games, and Quizzes, Virtual Field Trips, WebQuests) that English Language Arts preservice teachers were able to develop and conduct with middle school students in two urban school sites. Preservice teachers' reactions to their efforts are included with recent web sources that guided their work. Successes and problems are noted. Cooperating teacher encouragement, access to computers, and support from the university class appear to be factors that contributed to their accomplishments.

### **Introduction**

Internationally, there is interest in infusing technology in English programs and concern for adequate training for teachers (Hughes, 2003). Reports, articles, and conferences in the United States have advocated adoption of technology to foster student learning (DOE, 2000; McLester, 2002; NASBE, 2001; November, 2001; NECC, 2001; ICTE, 1999; Wisconsin University System, 2001; Wodarz, 2001). The timing is appropriate. An anticipated teacher shortage in the United States provides teacher education an opportunity and responsibility to revise their programs to prepare preservice teachers to use technology effectively in classrooms. Since 1999, the United States Department of Education has supported an initiative for promoting technology use by educators, the Preparing Tomorrow's Teachers to Use Technology (PT3) grant program. Participants have been charged with forming partnerships to implement innovative ways to address the need to expand the use of technology in K-12 schools and in teacher education programs. Preservice teachers are beginning to learn computer skills in their teacher education programs, but often in isolated courses. They usually have not used technology with students in their field experiences (Gibson, 2002; Whetstone, L. & Carr-Chellman, A., 2001).

During the three years of the PT3 grant at Seton Hall University in South Orange, New Jersey, the university worked closely with two nearby urban middle schools to increase the use of technology in teaching. The purpose of this article is to discuss technology applications English Language Arts (ELA) preservice teachers were able to use with grade 5-8 students as well as the sources that enabled them to develop the varied applications. ELA preservice teacher perspectives on their lessons are shared as well as factors that contributed to their success.

## **Background**

For nearly a decade, Seton Hall University has advocated and supported faculty use of technology. All undergraduate students and faculty have been provided laptops, and training for faculty on ways to infuse technology in their teaching has been continuous and extensive. In 1999, EDUCAUSE recognized the university for superior campus networking. In 2001, Yahoo Internet Life's "America's Most Wired Colleges" ranked the university 14<sup>th</sup> among United States' campuses and first among Catholic universities, for its hardware, academics and services in technology.

The secondary education program at Seton Hall has a strong commitment to develop teachers who become reflective practitioners with the depth and breadth of knowledge needed to make informed decisions about student learning. Increasingly, these decisions involve uses of technology. As part of the PT3 grant, the program has continued to examine and employ technology in its courses in order to help preservice teachers use technology effectively. In Computer Fundamentals, a freshman requirement, students developed projects using Microsoft applications, Excel, PowerPoint and created web sites, a helpful background to lead into teacher education students' creation of technology applications in a field experience associated with the Instructional Theory into Practice course. In this class, preservice teachers reviewed lesson plan sites for technology lessons, planned and taught lesson plans using different models of teaching, and demonstrated and discussed various ways to infuse technology into teaching. They were taught how to use the Inspiration program for webbing ideas for writing or project development. PowerPoint informational presentations were discussed as ways to stimulate student conversation and introduce open-ended questions about the material as

well as to serve as outlines of important ideas. It was noted that virtual field trips and web quests could be developed with PowerPoint. A 60 hour field experience in urban schools was connected to this course. In the class, website resources which provided descriptions and examples of the technology were shared, and some class time was devoted to development of the technology application to help preservice teachers get started. Preservice teachers were allowed to work in teams to complete and present technology lessons. Technology project descriptions in the course are in Appendix A following the references.

While this class is composed of all subject majors, this article will focus on the work of English majors only, who are typically the largest group in the class. Selected readings about technology practices in schools and discussions with colleagues in the PT3 Grant and in local schools were the basis for technology projects implemented in the class. In the next sections of the paper, the technology application will be described, ELA preservice teacher reactions to conducting the technology application with students will be shared, and current sources for its development will be listed. The sources for the technological applications are listed with brief descriptions, so readers will be able to find those that interest them. In addition, samples of ELA preservice teacher work are provided on the Portfolio Handbook in the Techprojects section found at <http://pirate.shu.edu/~devlinrb/portfolio/techprojectsdefined.html> (when users go to the eportfolio to see Techprojects preservice students created there will occasionally be a dialogue box asking them to put in a password, they should click cancel and will be able to proceed).

### **Technology Lesson Plans**

For this first assignment, ELA preservice teachers were asked to survey lesson plan sites and find five technology sample lessons that focused on different teaching areas in English: literature, writing, grammar, media. They were to select lessons that fostered communication, collaboration, and critical thinking (Flores, A., Knaupp, J.E., Middleton, J.A., & Staley, F.A., 2002). Below are selected representative popular sites; others are available under the title, *Helpful Lesson Plan Sites*, at

<http://pirate.shu.edu/~devlinrb/> on the right side of my homepage.

Lesson Plan Sites

<http://www.awesomelibrary.com>

<http://school.discovery.com/schrockguide/index.html>

<http://www.atozteacherstuff.com>

Cooperative Learning Lesson Sites

<http://sps.k12.mo.us/coop/cybercoop.html>

<http://www.educationplanet.com>

<http://www.cotf.edu/ete/modules/modules.html>

For ELA preservice teachers an extensive, specialized list of sites was developed, in these categories: media literacy, writing, grammar, and literature. *English Language Arts Sites*, grades 4-12, is at <http://pirate.shu.edu/~devlinrb/> on the right side of my homepage .

### **Teacher Web Site**

Preservice candidates found developing this web site at <http://www.teacherweb.com> for their cooperating teacher easy to use and update (TeacherWeb.com, 2000). Writing up the “Teacher Information” section had an indirect benefit—the opportunity to learn about their cooperating teachers’ background and what they wanted to achieve with their classes. These web sites, which provided announcements, events, homework, links to social studies’ sites and responses to frequently asked questions were also positively viewed by middle school students.

Middle school students commented on what they learned about their teacher and asked for additional links to use, but many said they would not be able to use the site regularly because they did not have a computer. The purposes of these teacher web sites are to connect home and school and foster independent learning; with increased computer access for students, they will get more use. At this time, these sites got used as lessons.

### **Inspiration Software**

Preservice teachers found many uses for this program that promotes visual learning, brainstorming of ideas, and organizing skills. One stated, “Inspiration is a better

way to represent ideas. Students were able to depict the philosophy and teachings of Martin Luther King and Malcolm X and could see the differences between them.” An ‘inspired’ guide to revision helped students edit their papers. Middle school students also presented character traits, events in a story, or displayed an author’s life and writings assisted by Inspiration. This program proved to have multiple uses.

Teachers can download a free 30 day trial of this program from this website <http://www.inspiration.com/freetrial/index.cfm> or they can write the company and receive trial CDs and program booklets for their teachers in their school. The site and each CD has a tutorial that shows how the program can be used.

### **Puzzles, Games, and Quizzes**

Presenting typical content with a unique spin caught student attention and maximized review time. With crossword puzzles, preservice teachers commented that the “students were having so much fun that they did not realize they were learning.” Quia helped students practice matching synonyms, making a computer period productive. Scavenger hunts were used for literary facts with success. For an overview lesson on literature, pictures of characters and settings were captured from the Internet and boxes for note taking were added to organize the students. “Having a prepared guide, the students focused on their classmates’ discussion. They remembered the material.” These follow-up activities to cooperating teachers’ lessons were confidence builders for the preservice teachers and helped them get integrated into the class.

#### Sites

*Daily Buzzword.* <http://www.wordcentral.com/cgi-bin/bwwod.pl>

Part of the Merriam-Webster web site, it presents a new word every day, the definition, word usage, and a mini-quiz.

*Education 4 Kids.* <http://www.edu4kids.com>

Provides drill and practice games.

*Fun Brain.* <http://www.funbrain.com>

Contains already made quizzes that students can take over the Internet either at school or at home. Results of the quizzes can be e-mailed to the teacher. Teachers also have the option to make their own quizzes.

*High School Hub.* <http://highschoolhub.org>

Provides interactive quizzes, games, puzzles and homework assistance.

*Hot Potatoes.* <http://web.uvic.ca/hrd/halfbaked/>

Introduces students to a wide range of puzzles and activities. Software must be downloaded. It includes assessment tools and other important tools and activities.

*Internet Coach Puzzle Center.* <http://puzzles.apte.com>

Introduces students to a wide range of puzzles and word scrambles and also allows students to send puzzle greeting cards.

*Kids Go Wild.* <http://wcs.org/7490/kidsgowild/>

Includes fun and educational games, facts, and news.

*Puzzlemaker.* <http://www.puzzlemaker.com/>

Allows users to create puzzles and games for newsletters, flyers, handouts, or classroom assignments.

*Quia.* <http://www.quia.com/>

Creates activities and games for classes

Krajka (2003) identifies additional sites for web-based quizzes and describes ways to develop these tools.

### **Virtual Field Trips**

These trips enabled middle school students to travel to cities, countries, different environments, and museums. The student response to a virtual field trip to India prompted one preservice teacher to realize these tools are “good ways for introducing world cultures.” Students who were reading *Harry Potter* got to travel virtually to London. “Students were asked to use their imagination and transport themselves to another world. They were shown pictures of landscapes, monuments, legends, architecture, geography, and people. The students remained focused and said they hoped they could go someday.” Of course, middle school students are interested in their new teachers as people, so the trip, “A Day in the Life of a Student Athlete,” by an English major on the soccer team was enjoyed and stimulated questions about the college experience.

Sites

These sites were helpful in guiding preservice teachers in understanding the purposes of virtual field trips and seeing examples of them.

Blackwell, V. (2001). *Virtual field trips*. <http://exit3.i-55.com/~vickib/vft.html>

Blackwell offers sites on a range of topics expanding the notion of field trips, e.g., sites for museums in art, broadcasting, history, science and surgery as well as museums by country; scientifically rich sites, e.g., rain forests, volcanoes, fossil hunting, and interesting locations, e.g., Hawaii and Antarctica.

Foley, K. (1996-2003). *Tramline*. <http://www.field-guides.com/vft/index.htm>

Field trips with suggested grade levels in science, literature, history, and miscellaneous areas are noted.

*Onlineeducator*. (1995, March).

<http://www.cris.com/~felixg/OE/ARCHIVE/MUSEUM.html>

This article gives guidelines for preparing and presenting field trips and highlights lesson possibilities with museums. At the top left are references for writing, space, geography, writing, earthquakes.

Teague, H. 1996-2003. *OOPS (Our Overnight Planning System)*.

<http://oops.bizland.com/vtours.htm>

This site provides teaching strategies useful with field trips, including “postcards, travel, logs, hide and seek, and scrapbooks.” It has trips to major cities (e.g., Paris, Rome), noteworthy museums, and unique locations.

## WebQuests

WebQuests are problems that are solved by using the Internet, in small groups, where students often assume specific roles. Preservice teachers choose topics that fit in curriculum (“The Meaning of Names,” “Civil Rights,” “Writing Short Poems”) or supplemented the curriculum in interesting ways (“My Future High School Choice,” “The Olympics,” “Investigate Children’s Rights”). WebQuests allow preservice English teachers to enlist their creativity and stimulate their students.

Preservice teachers learned that having a novel approach and worthwhile content was not sufficient; monitoring the task was essential. “After going to a site on creating a student newspaper in the instructional television room, students collaborated on

developing current events newspapers using Word. Students worked well together on the web gathering information, but I found it hard to watch everyone to make sure they were on the correct sites.” Kurek (2002) provides a clear description of using webquests in a college classroom with criteria for evaluation of their products.

Despite the challenges of conducting these longer term projects, the preservice teachers who used them were pleased by the outcomes. They found students grew in attention and in comfort with using the Internet for searching and worked well in groups. They produced competent writing, presentations and displays as products. Cooperating teachers stepped in to guide completion of projects when preservice teachers were unable to be with the class due to schedules, providing an opportunity for collaborative planning.

Sites

Devlin-Scherer, R. (2001, January). *Techproject page*.

<http://pirate.shu.edu/~devlinrb/portfolio/techprojectsdefined.html>. Sample ELA preservice teacher technology projects are available on this page.

Dodge, B. (2000). *The Web Quest Page*. <http://edweb.sdsu.edu/webquest/webquest.html>

This address is the overview page. Sample webquests in a variety of subject fields and grade levels have been moved to <http://www.webquest.org/> When you go to this address, on the left side are the words, top (identifying good webquests), middling (a category for quests that may be older or have some useful features) and new. New quests are added frequently.

## **Conclusion**

This field experience was not without challenges. Preservice teachers’ comments revealed the value and kind of preparation required when using technological applications. “Confusion and chaos will ensue if the task is not laid out properly.” One preservice teacher spent considerable time preparing sites for middle school students to search. Listing them on the whiteboard was not adequate as the addresses were too long; students had trouble reading them and became inattentive. Having the site addresses on cards in the hands of pairs of students for the next group kept the activity moving. To save time at the beginning of the lesson, the teacher may want to bookmark the website on each computer before the lesson. With more complicated applications, such as web



quests, preservice candidates noted the importance of timing, clear directions and a step-by-step approach.

Pacing individual lessons is usually a challenge for the beginner. Sometimes English preservice teachers found themselves rushing students as they introduced tools and tried getting projects completed in a short time frame. “The students were introduced to Inspiration and in groups created a character web using the program. It would have been better to allot more time for learning the program.” In addition to overplanning, on a number of occasions, preservice teachers described having too much detail in an Inspiration web or PowerPoint.

When having students write papers, ELA preservice teachers worried about the cut and paste syndrome. “I tried to emphasize using your own words, but the students did copy and paste a lot.” Separating the gathering information from the actual writing time or collecting and discussing the information as a group, then writing up each section helped avert this problem. Preservice English teachers also found students were sometimes more interested in activities tangential to the task. “They also got attracted to Word Art and that took a lot of time.” Specifying requirements for a number or length of written items with time limits, having a model entry as an example, then suggesting that a special way to present the information would be presented when they were finished seemed to help students focus on their writing.

Nonetheless, ELA preservice teachers learned a great deal from their experience because of access to equipment and the support they received at the school sites, which allowed them to try out different technology projects. The cooperating teachers often made suggestions in planning and content. They also encouraged the middle school students to be patient through any technology mishaps. Typically, student responses were highly positive; they showed their interest by their active participation and engagement. Support, current sources, and systematic guidance made this field experience successful in promoting literacy learning for middle school students and teaching opportunities for novice teachers.

After three years, the secondary program is currently undergoing revision and preparing for accreditation. The urban field experience is being moved to a course titled Culture Community and Schools because the content of this course is a good match with urban

schools. Since it is a senior year course, preservice students will have more experience to bring to urban settings. The Instructional Theory course will be based at a Professional Development School. The technology projects are being spread across the courses in the program; it is likely the Instructional Theory course will maintain use of Inspiration, puzzles, and virtual field trips.

## References

- Department of Education (DOE). (2000). "E-learning: Putting a world-class education at the fingertips of all children". District of Columbia. [ERIC Document Reproduction Service Number 444604].
- Flores, A., Knaupp, J.E., Middleton, J.A., & Staley, F.A. (2002). "Integration of technology, science, and mathematics in the middle grades: A teacher preparation program." *Contemporary Issues in Technology and Teacher Education*, 2 (1), <http://www.citejournal.org/vol2/iss1/mathematics/article1.cfm>
- Whetstone, L. & Carr-Chellman, A. (2001). "Preparing preservice teachers to use technology: Survey results". *TechTrends*, 46 (4), 11-17, 45.
- Gibson, S. (2002). "Incorporating computer-based learning into preservice education courses". *Contemporary Issues in Technology and Teacher Education*, 2 (1), <http://www.citejournal.org/vol2/iss1/currentpractice/article2.cfm>
- Hughes, D. (2003). "Teaching an old dog new tricks: Effective use of the word processor in ESL classrooms". *Teaching English with Technology: A Journal for Teachers of English*, 3 (1), [http://www.iatefl.org.pl/call/j\\_tech12.htm](http://www.iatefl.org.pl/call/j_tech12.htm)
- International Conference on Technology and Education (ICTE). (1999, October 10-13). Preparing for a new century of learning: Technology, education and the Internet. *Proceedings from the International Conference on Technology and Education*. Tampa, FL: Author. [ERIC Document Reproduction Service Number 462980].
- Krajka, J. (2003). Making web-based quizzes in an instant. *Teaching English with Technology: A Journal for Teachers of English*, 3 (1), [http://www.iatefl.org.pl/call/j\\_review12.htm](http://www.iatefl.org.pl/call/j_review12.htm)
- Kurek, M. (2002). "The Internet in ESL education: A proposal for the internet-enhanced college courses". *Teaching English with Technology: A Journal for Teachers of English*, 2 (5), [http://www.iatefl.org.pl/call/j\\_article11.htm#article2](http://www.iatefl.org.pl/call/j_article11.htm#article2)
- McLester, S. (2002). "Virtual learning takes a front row seat". *Technology and Learning*, 22 (8), 24-26, 30, 34-36.
- National Association of School Boards of Education (NASBE). 2001. *Any time, any place, any path, any pace: Taking the lead on e-learning policy*. (Report of the NASBE Study Group on E-learning: The Future of Education). Alexandria, VA: Author. [ERIC Document Reproduction Service Number 460190]

National Educational Computing Association (NECC). (2001). "Building on the future". *Proceedings of the National Educational Computing Conference*. Chicago, IL: Author, June 25-27. [ERIC Document Reproduction Service Number 462929].

November, A. 2001. *Empowering students with technology*. Skylight Professional Development: IL Wisconsin University System. (2001). "Distance learning 2001". *Proceedings of the Annual Conference on Distance Teaching and Learning*. Madison, WI: Author, , August 8-11. [ERIC Document Reproduction Service Number 462621]

Wodarz, N. (2001). "Keeping up with change". *School Business Affairs*, 67 (9), 66-68.

## Appendix

### EDST 2003

#### Technology Projects and Instructional Strategies

**Lesson Plan Sites** <http://pirate.shu.edu/~devlinrb/>

Survey lesson plan sites for 10+ plans on different topics taught in your field (e.g., in English, seek lessons in literature, writing, grammar). Print copies of plans you select. On a cover sheet, offer reasons for selecting them. Note activities that seem unique to you, that catch your interest, that are activities you would do, that provide useful ways of assessing students. Also describe any plans you rejected and why. The site noted above is my homepage; go to Helpful Lesson Plan Sites)

**Learning Stations** <http://education.shu.edu/pt3grant/learningstations1.html>

For background material on middle schools, read Learning Station on American Middle School written by Dr. Sylvester Kohut. Tips on planning portfolios are also available at a second Learning Station by Devlin-Scherer, Zinicola, and Oesen. For both of these do a summary indicating main points.

#### **Techprojects (will be a section of your final portfolio)**

Additional sites will be provided during classes.

To assist you as you develop techprojects, a packet is attached with a listing of potential activities that involve **word processing, software, or the internet**. Create a concept map using Inspiration software (available at Seton Hall. The Curriculum Library, second floor Walsh Library, has a helpful text, *Make It With Inspiration*. If you are in classroom with a few computers in the back, *Ideas and Strategies for the One-Computer Classroom* is also available. Camden Middle School is involved in Problem-Based Learning which can incorporate technology so you may be assisting your teacher in this area. An article describing **Interactive powerpoint presentations** is provided. Guidelines, sources and uses for more extended strategies that use technology to promote critical thinking in students are described in articles on **Virtual Field Trips** and **WebQuests**. Several useful sites for developing Webquests follow:

Bernie's Dodge's site is a wealth of samples and will serve as a guide for this class.

<http://edweb.sdsu.edu/webquest/webquest.html>

Kathy Schrock's WebQuests has articles and links to webquests and factors to consider in their design.

<http://school.discovery.com/schrockguide/webquest/webquest.html>

SHU contributions: Professor Zinicola has science miniprojects you could use on a variety of science topics. [http://pirate.shu.edu/~zinicode/tech\\_projects.htm](http://pirate.shu.edu/~zinicode/tech_projects.htm) In the middle of the Techprojects page are a series of brief and informative powerpoints on the environment, unusual creatures (hissing cockroaches, anyone?) and anatomy.

Use these sites to help you construct a virtual field trip (VFT):

<http://oops.bizland.com/vtours.htm>

<http://exit3.i-55.com/~vickib/vft.html>

<http://www.field-guides.com/vft/index.htm>

VFT examples—typically the purpose is of a VFT is to share a location with student that they will not have an opportunity to see or to prepare them for a location that you are going to visit together (e.g., a museum); in mathematics, you might describe the life of a famous mathematician or a group who worked on significant math concept; take students on a race and have them do calculations along the way, e.g., Iditarod; have students visit accounting or investment firm; have students examine data on disasters, earthquakes and do calculations

### **Teacher Homepage: Link to the Community**

Developing a homepage for students and families will be demonstrated in class and you may design such a page for yourself and/or with a teacher <http://www.teacherweb.com> See my example under NJ/SetonHallUniversity. Also see K-12 teacher samples under other schools on list.

### **Classroom Materials**

Below are listed some useful sites to help you design **puzzles, mazes, word searches** and **games**.

Quia Games; Quintessential Instructional Archive

<http://www.quia.com>

Fun Brain

<http://www.funbrain.com>

Puzzlemaker

<http://puzzlemaker.school.discovery.com>

### **Digital Camera**

We will also have demonstrations in the use of the digital camera and expect you to find an appropriate use for that tool in documenting your work with students and student activity.

### **Displays**

If you guide a group of students or create a display yourself, here are some tips.

Trifolds or large posters are useful to show visuals and organize material that you present. For headings, it is interesting to use unusual font to catch attention, however, for other text, use Arial font size 40 for visibility. Similar to overheads, displays benefit from use of phrases and avoidance of long text. Use handouts to supplement materials so all the audience can follow the content. Choose colors carefully. We find yellow on white is blurry for viewers at a distance. Avoid clutter; let your message and information stand out. Professor White recommends [excite.com](http://excite.com) for pictures.