

Introducing Novice Computer Users to Lesson Plan Development through WebQuests

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Abstract: Novice computer users learned how to cut and paste, create links, and insert graphics and background in a collaborative environment. Preservice teachers also had the opportunity via the WebQuest template of designing an interactive lesson plan. While the students were free to explore resources within their own particular area of interest and certification, instruction and guidance was provided for a structured evaluation of websites that might be included in their web-based lesson plan.

In early 1995, [Dr. Bernie Dodge](#), Professor of Educational Technology at San Diego State University, and his graduate assistant, [Tom March](#), developed a model that would use learners' time well, focus on using information rather than looking for it, and support learners' thinking at the levels of analysis, synthesis and evaluation. WebQuests, as defined by Dr. Bernie Dodge (1997), are "an inquiry-oriented activity in which some or all of the information that learners interact with comes from resources on the internet, optionally supplemented with videoconferencing".

Their WebQuest model is outlined in [Some Thoughts About WebQuests](#). Over the years, many pre-service and in-service teachers have implemented Dodge's WebQuests as an interactive means of engaging student learning. The [Freed-Hardeman University](#) EDU 506 graduate students have created "Short-Term WebQuests" whose instructional goals are "knowledge acquisition and integration, described as Dimension 2 in Marzano's (1992) Dimensions of Thinking model." At the end of these short-term WebQuests, the students have "grappled with a significant amount of new information and made sense of it." (See ["Some Thoughts About WebQuests"](#) [Dodge, 1997] for more information.)

The graduate students' WebQuests are deliberately designed to make the best use of a student's time. They are written for a single discipline for immediate use within the teachers' classrooms. The WebQuest project focuses the creators on tangible and

hi-tech tasks, gives them an audience to create for, and opens up the possibility of getting feedback from that distant Web audience via an [embedded e-mail link](#). They are hosted on the [FHU School of Education](#) web server.

Before launching into WebQuests, our students spent time with [Project Two -- Finding Information on the World Wide Web](#). Since the Web is not indexed in any standard manner, finding information can seem difficult, particularly for novice users, even if they happen to be experienced teachers. Without a clear search strategy, the student may find that using a search engine is often like wandering aimlessly in the stacks of a library trying to find a particular book. A "Finding It Online" Tutorial was made available for those who self-assessed their Internet skills as seriously lacking. "Regular" search engines such as Yahoo, Excite, and Google were demonstrated and utilized in organized searches and then compared and contrasted with metasearch engines, such as Ixquick, Mamma, and Dogpile. As a concluding exercise, an [Internet Scavenger Hunt](#) was independently accomplished and critiqued. This provided the graduate students with some personal experience and insight into using the Internet.

Our classes began to integrate the Internet for learning by collecting sites that they found most useful, interesting, and interactive on their chosen topic. Since many projects have already been done, students were required to select either a new topic or to revise an existing WebQuest in a different direction. Their searches on the web save their students, and others who will use their project, hours of aimless surfing. While the students were certainly encouraged to collect the Internet locations on paper, they were instructed to set up folders were set up in Netscape Navigator and to bookmark their favorite sites. Recognizing that this would be specific for a particular machine, the students used the same computer each class session. [Bookmarks for Education](#) were provided as a starting point for the class. A searchable database of bookmarks was also made available at [iKeepBookmarks.com](#).

The instructor also provided links to a variety of [Webpage Construction Resources](#) on the bookmarks lists. The resources by category on the list include: Backgrounds; Dividers & Bars; Graphics & Clip Art; and WebPage Design and Evaluation hotlinks. Our students' creations are richer and more sophisticated because of resources that may never have been available in their classrooms before. This is also the time and place to educate students on copyright and fair use policies. These webpage construction resources offer an open, student-centered approach that encourages meaningful construction of meaning.

Critical issues to be resolved involved questions about the topic selected and the web links that were bookmarked. The topic selected needed to be original. With many WebQuest projects already done by previous students in EDU 506, a thorough examination of the database of existing projects lead to a class discussion of the meaningfulness to the curriculum of the anticipated topic of choice. Since our students come from all over West Tennessee and even some from surrounding states, curriculum guides from many places, available through our [Instructional Resources Center](#), were consulted as necessary. There also needed to be a genuine enthusiasm for the topic and outcomes for excitement within the person designing the WebQuest. The topic needed to

have available resources on the net that were of sufficient quality and interactivity that could not be found in traditional classroom textbooks. While the questions and tasks proposed in the WebQuest were directed toward inquiry-learning, the project needed to be more than just simply another class work or homework assignment. The tasks were phrased in such a way as to evoke higher-level, transformational thinking in the minds of the learners targeted by the WebQuest.

With the author's instruction and further guidance by graduate assistants, novice computer users learned to cut and paste, to create links, to insert graphics and background, and to use more than one application at a time in a collaborative environment. Pre-service teachers and graduate students working on initial certification also had the opportunity via the WebQuest template of designing an interactive lesson plan. While the students were free to explore resources within their own particular area of interest and certification, instruction and guidance was provided as to effective evaluation of websites that might be included in their webpage.

The [WebQuest Project](#) is an inquiry-oriented activity in which most or all of the information used by learners is drawn from the Web. Using Netscape Composer, students and teachers have been guided through the process of creating a short-term, single discipline WebQuest. In particular, the [EDU506 Computer Applications in Education](#) graduate students have designed web pages that could be used immediately in their classrooms. These samples are available for viewing and comment, and thorough [instructions](#) for creating one's own interactive web pages for students and parents are provided.

This author has used a revised version of Dodge's [WebQuests template](#) as a teaching tool for lesson plan creation with [undergraduate](#) and graduate education students, some of whom had little or no computer experience. Although other avenues are available to accomplish the same ends, such as MS Word, MS FrontPage, and MS Internet Explorer, the Netscape Communicator 4.x suite offers an integrated package that has a low learning curve. One of the items available as part of Netscape Communicator's package is Composer, an [HTML/webpage creation application](#).

The reaction of the students has been overwhelmingly enthusiastic. Some of the more experienced computer users have been teamed with the novices, but both are required to work on an independent project. The projects are demonstrated for the entire class with evaluative comments made by both their peers and the instructor. The web pages were also [evaluated](#) for lesson plan content and technical and aesthetic qualities. All of these aspects were tied together in interactive web pages that were then edited by the webmaster and uploaded onto the School of Education's server for viewing on the World Wide Web. This enables the teachers and their students to access the WebQuest from any connected computer, and other teachers at their grade level or subject-matter discipline across the world to have access to their learning experiences.

[WebQuests for EDU 506](#) target specific learning, rather than merely sending students to Web sites hoping they will find something useful there. Each part of [The Process](#) requires

the students to go directly to a particular site and do a specific task. Seldom is the student given the option or freedom to get lost in the vast wilderness of the Internet. These compelling experiences foster the attitudes, knowledge, and skills that are the central learning goals of the WebQuest. One of the reasons why the information on the Internet is so valuable is because it offers a breadth of perspectives and viewpoints that are usually not available in traditional classroom textbooks. Students working through the WebQuest benefit from being linked to a wide variety of Web resources so that they can explore and make sense of the issues involved in the challenge. (See Tom March's "[Working the Web for Education](#)" for a more detailed analysis.)

As more students have created WebQuest activities, we are building a database of high-quality activities available for use by teachers and students around the world. We have recently begun using [SiteAdd.com](#) as a free and easy way to register our sites with the top search engines. In this way, we hope that many more educators will use our sites for learning activities for their students and that others will use our projects for models to inspire their own creativity. An [evaluation checklist](#) is used to assess technical competence of the project, and the demonstration of the project in front of peers before posting to the Internet allows the creators to tweak the WebQuest. Therefore, we expect the activities created by our EDU 506 students to be among the best on the Web. Educators who use web-enhanced delivery of lessons tend to be highly-motivated people who thrive on creativity and enjoy learning. By sharing what we have created on the Internet, we also appreciate the feedback that comes from other professionals who have viewed and used our pages. Our class fosters a supportive and professional feedback loop so that we can all create the best learning experiences for our students.

Some of our students have gone on to complete additional WebQuests of their own. Most of these independent projects reside on their individual school's intranet, but a few have been published to the Web, such as Kim Fussell's [Developing Tennessee Pride](#). One of the former students of our graduate program, Mrs. Stacey Valle, is now the webmaster for her school, [Pin Oak Elementary School](#), in Lexington, Tennessee. Others continue to integrate technology into their classroom lessons on a regular basis.

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