

Summer 2002

WebQuest: A Solution for Online Learning

Ellen W. Wiley

Valdosta State University, ewiley@valdosta.edu

Follow this and additional works at: <https://digitalcommons.kennesaw.edu/seln>



Part of the [Instructional Media Design Commons](#)

Recommended Citation

Wiley, Ellen W. (2002) "WebQuest: A Solution for Online Learning," *The Southeastern Librarian*: Vol. 50 : Iss. 2 , Article 7.
Available at: <https://digitalcommons.kennesaw.edu/seln/vol50/iss2/7>

This Article is brought to you for free and open access by DigitalCommons@Kennesaw State University. It has been accepted for inclusion in The Southeastern Librarian by an authorized editor of DigitalCommons@Kennesaw State University. For more information, please contact digitalcommons@kennesaw.edu.

WebQuest: A Solution for Online Learning

Ellen W. Wiley, Ed.D.

Dr. Wiley teaches courses in curriculum, technology integration, and instructional design for school media specialists at Valdosta State University. She first began experimenting with WebQuests in 2000 with the development of a totally online course. She now uses the format for two online courses. She can be contacted at ewiley@valdosta.edu.

Designing and developing meaningful and engaging online activities presents a challenge when preparing to teach a totally online course for the first time. How do you structure the activities so that the learner can focus on the content instead of the delivery system? How do you effectively communicate the content and activity instructions so that the learner can easily follow the flow of information? These are two of the questions that must be asked as one approaches the design and development of a totally online course.

Finding the Solution

The course to be designed and delivered online was Curriculum, Instruction, and Technology Integration. The course was described as, "An exploration of curriculum issues and trends, curriculum development, integration of technology into the curriculum, implementation of innovative instructional techniques, and legal/ethical issues across content areas and grade levels."¹ The target audience for the course included masters and education specialist students enrolled in an instructional technology program. Most of these students would be seeking certification as school library media specialists.

The design and development of the course began with the objectives and activities already specified in the syllabus. One of the activities required in the course was a technology integration project using at least one

development tool. However, the format for this technology integration project had not been specified in the syllabus. Given the fact that the course was to be delivered totally online, the decision was made to use the Internet as the delivery system for the student project as well. After exploring several options, the WebQuest format was selected for the technology integration project required of students in the course. WebQuest is a format for designing inquiry-based lessons using predominately online resources.² According to Dodge, "A WebQuest is built around an engaging and doable task that elicits higher order thinking of some kind. It's about doing something with information. The thinking can be creative or critical, and involve problem solving, judgment, analysis, or synthesis."³ The WebQuest web site offers valuable resources for learning more about WebQuests at <http://webquest.sdsu.edu/>.⁴

The decision was made to select the WebQuest format as the structure for the course as well. By standardizing the format of the lessons and activity instructions the students would be able to follow the flow of the course more easily.

Meeting the Needs of the Target Audience

The use of the WebQuest format would help build skills needed by the target audience in their future roles as school library media specialists.⁵ These roles include:

Navigator: Learn to navigate and effectively search the Internet.

Teacher and Collaborator: Collaborate with teachers to design and implement authentic learning activities that utilize Internet resources.

Evaluator: Develop Evaluation tools and actively integrate evaluation into the curriculum.

Publisher: Create resource guides that assist students, teachers, administrators, and parents to find quality Internet sites that are relevant to the curriculum.

Program Administrator: Work collaboratively with members of the learning community to develop program policies related to Internet use.

Staff Developer: Take a lead role in teaching faculty and administration to use the Internet effectively and to integrate Internet use into the curriculum.

Family Resource: Promote positive and creative uses of the Internet to families.

Gaining experience in designing and developing WebQuests would provide one way in which these future school library media specialists would be able to carry out these new roles. An analysis of the process of designing and developing a WebQuest will illustrate how this can be accomplished.

Introduction. The *Introduction* section presents the problem or question to be addressed in the WebQuest. It also provides the background for the question or problem. In this part of the WebQuest process, the teacher and collaborator role of school library media specialists is supported as they work with others to design and develop a WebQuest to provide for authentic learning experiences. School library media specialists will be able to assist teachers in identifying real problems or questions that relate to content standards or information literacy standards.

Task. From this foundational problem or question, the WebQuest designers brainstorm a list of tasks that are rich with opportunities for taking on new roles or viewing the question or problem from different perspectives. From this list the designers will select an engaging, manageable task to be accomplished. The *Task* section of the WebQuest provides an overview of the tasks to be accomplished by the learner. According to Dodge, the creator of the WebQuest format, this is the most critical part of a WebQuest.⁶ There are several categories of tasks: compilation, mystery, journalistic, design, creative product, consensus building, persuasion, self-knowledge, analytical, judgment, and scientific. These types of tasks allow for the development of WebQuests that are aimed towards higher order thinking skills. This step in the design and development of a WebQuest

continues to place school library media specialists in the teacher and collaborator role.

Process. Once a task is selected for a WebQuest, the designers must describe the process to be taken to accomplish the task. The *Process* section of the WebQuest contains this description along with information sources needed to complete the task embedded within the description. Other off-line information sources may be used as well. This step provides the opportunity for school library media specialists to continue in the teacher and collaborator role. In addition they are able serve in the navigator, evaluator, and staff developer roles as they work with teachers in the evaluation and selection of resources needed to complete the task. The program administrator role comes into play as they follow policies for Internet use.

Evaluation. The *Evaluation* section of the WebQuest provides the criteria that will be used to evaluate the product or products of the task. Rubrics are often used with WebQuest tasks. A review of sample WebQuests will offer ideas for developing evaluations for all types of tasks. In the teacher and collaborator role school library media specialists will work with teachers to design and implement evaluation methods in WebQuests. The staff developer role will also come into play as part of the process of integrating Internet use into the curriculum.

Conclusion. The *Conclusion* section is used to bring closure to the WebQuest. In this section of the WebQuest, learners are able to reflect on the process they have completed. It may also offer guidance to the learner for extending the experience. School library media specialists can use the *Conclusion* section of the WebQuest to extend the experience to include the learners' families. This would facilitate their role as a family resource.

Publishing the WebQuest. After the design and development process is completed, the WebQuest is ready to be published on the Internet or an intranet within the school. School library media specialists take on the role of publisher as they assist teachers in making their

WebQuests available for use. They may also manage a collection of WebQuests and other resources that relate to the curriculum. These resources could be made available to students, teachers, administrators, and parents.

Nine Information Literacy Standards for Student Learning

In conjunction with the roles described above, the target audience will also be responsible for addressing the Nine Information Literacy Standards for Student Learning set forth in *Information Power: Building Partnerships for Learning* in 1998.⁷ This publication, coauthored by the American Association of School Librarians (AASL) and the Association for Educational Communications and Technology (AECT), provides the information literacy standards for school library media programs. These standards therefore define the role of the school library media specialist.

The types of tasks inherent in a well-designed WebQuest would also be able to support these literacy standards. The criteria specified for a well-designed WebQuest emphasize the importance of designing and developing WebQuests that are rich, relevant, and real.⁸

Standards One through Three. The “rich” aspect of a well-designed WebQuest would relate most closely to the Information Literacy category of Nine Information Literacy Standards for Student Learning. In standards one through three, “The student who is information literate accesses information efficiently and effectively...evaluates information critically and competently...and uses information accurately and creatively.”⁹ An example of how a WebQuest can be used to address standards one through three can be found in “Adventure into the Unknown... A WebQuest on the Lewis and Clark Expedition.”¹⁰ In this WebQuest, students keep a field journal that is used to construct a board game to relive their journey.

Standards Four through Six. The “relevant” aspect of a well-designed WebQuest would relate most closely to the Independent Learning

category of the Nine Information Literacy Standards for Student Learning.¹¹ In standards four through six, “The student who is an independent learner is information literate and pursues information related to personal interests...appreciates literature and other creative expressions of information...and strives for excellence in information seeking and knowledge generation.”¹² An example of how a WebQuest can be used to address standards four through six can be found in a WebQuest such as “Rewriting Romeo and Juliet.” In this WebQuest, students are given the opportunity to see how themes in literature relate to their lives and experiences as they “update one scene from the play into a more current time period.”¹³

Standards Seven Through Nine. The “real” aspect of a well-designed WebQuest would relate most closely to the Social Responsibility category of the Nine Information Literacy Standards for Student Learning.¹⁴ In standards seven through nine, “The student who contributes positively to the learning community and to society is information literate and recognizes the importance of information to a democratic society... practices ethical behavior in regard to information and information technology...and participates effectively in groups to pursue and generate information.”¹⁵ An example of how a WebQuest can be used to address standards seven through nine can be found in “Butcher, Baker, Candlestick Maker...what will my next career be?” In this WebQuest, students are asked to participate effectively in groups to locate and generate information using the Internet.¹⁶ As members of groups, the students are able to demonstrate the use of strategies for assuring that all group members have equitable access to information needed to complete the task.¹⁷

Designing and Developing the Course

A management system for the online course was adopted so that the instructor could begin the construction of the online learning environment in which the course would be housed. Adoption of this system allowed the instructor to know the tools that would be available before the activities

were designed or modified. *WebCT*[®] was used as the management system since it was the official management system adopted by the university system. *WebCT*[®] provides a password-protected learning environment in which the instructor can deliver course content, provide learning activities, conduct discussions, administer assessments, communicate via email, and provide feedback. See **Figure 1** in the Appendix for a screenshot of Homepage for CIED 7060 course built using *WebCT* 3.6 Standard Edition.

With the management system, roles of school library media specialists, the Nine Information Literacy Standards for Student Learning, and the course objectives in mind the process of designing and developing the Curriculum, Instruction, and Technology Integration course was begun.¹⁸ Several tasks were defined in the existing syllabus. The goal now was to configure these tasks for delivery in an online format.

The first task required the students to read a collection of articles on a given topic and then state and support their position in a one to two page paper with references. This task readily converted to postings to a discussion board that could be read by the members of the class. This in turn led to the addition of an online discussion component for the course that required students to read and respond to a given number of position papers. This task would provide the typical class discussion of a face-to-face class.

The midterm examination for this class was designed as a literature review of the role of technology integration in each student's particular curriculum area. These papers were submitted as attachments via the mail feature in *WebCT*[®].

Another task in the course was a Content Analysis Research Project that required students to conduct a content analysis of selected professional resources. This activity was easily converted for online delivery. Selected professional resources would be identified by the student and approved by the instructor. The student would then be able to analyze these resources to determine the major trends. Information from the Content Analysis would be presented in a report format with graphs and

narrative. These reports would be submitted via attachments in the mail feature in *WebCT*[®].

Students were required to evaluate a curriculum in a content area of their choice. To convert this activity for online delivery, a discussion topic was established where students would be able to post their responses to a series of questions. These responses would be available for peer review so that other class members could read evaluations of curricula that were similar to their own or that were of interest.

The final tasks were related to the Technology Integration Project. This project was divided into four tasks. First the students were assigned a web site evaluation task in which they identified, evaluated, and annotated web sites based on criteria provided. Based on the content area of these web sites students were placed into groups to complete the second task. In groups the students completed a WebQuest planning sheet. Instructor feedback on the planning sheet was provided to the students before they began the third task. This task was the creation of an individual WebQuest using a template provided by the instructor. The final task would require the students to provide a peer review of the WebQuests for two classmates. These reviews were conducted based on a WebQuest evaluation rubric.¹⁹

With the tasks established, the next step in the process for designing the course required the clustering of the content specified by the course objectives into weekly lessons. To develop the lessons a template was created based on the WebQuest format. *FrontPage*[®], a development tool by *Microsoft*[®] for creating web pages, was selected for developing the template.²⁰ Each lesson contained an *Introduction* section that served as the presentation or lecture for the lesson content. The *Task* section for each lesson assigned tasks in an appropriate sequence for the course. Step by step instructions along with needed resources were provided for tasks in the *Process* section of each lesson. The *Evaluation* section included specific criteria that were established for each task. The completed lessons were then uploaded to *WebCT*[®] and linked in the course content area. See **Figure 2** in the Appendix for a Screenshot of Lesson page for CIED 7060 course built using *WebCT* 3.6 Standard Edition.

These lessons appeared in a table of contents format with links that could be accessed by students. Each link was labeled with the lesson topic. Lessons could be read on screen or printed for a reference. The on screen lesson contained active links to resources on the Internet and detailed task instructions. A list of the tasks also appeared as part of the table of contents so that students would be able to access the information without returning to the lesson in which the task was assigned. See **Figure 3** in the Appendix for a screenshot of the Course Content page for CIED 7060 course built using WebCT 3.6 Standard Edition.

The approach selected for the *Conclusion* section was different from the typical WebQuest format. Weekly email updates were used to provide a bridge to the next topic in the course. Addressing the *Conclusion* section in this manner provided for more personal interaction with the students. Guidance was provided to the students based on individual and group needs instead of a preconceived path.

Reflecting on the Course

Structure was critical to the success of the online course. The structure provided by following a format such as WebQuest ensured that students would be able to locate information and resources efficiently. The students found the structure of the lessons easy to follow. The consistent format increased their comfort level in an unfamiliar learning environment. This allowed the students to focus on the content instead of the delivery system.

The structure provided by the WebQuest format was also important for the course designer and developer. Having a format, such as WebQuest, that had worked successfully for

online activities provided a level of confidence as the course was developed. Given the structure of the lessons the instructor was able to work from a template to develop the web pages. The use of a template decreased the development time required. The initial organization and structure also proved to be a time saver when only minor modifications were necessary when the course was taught again.

It was essential to build an online classroom environment where students believe that the instructor was accessible. The psychological distance inherent in an online course can be bridged through individual and group interactions via email and discussion postings. Special care was given to ensure that these interactions accurately convey the intended message. Students readily interacted through their questions and comments in discussions and mail. Timeliness of responses and level of feedback by the instructor were mentioned by students as strengths of the online course.

No class is ever “done” whether it is taught face-to-face or online. The instructor must always seek ways to improve the course. Student input led to the addition of a more detailed schedule/grade sheet that specified the task due, date due, and point value in a one-page form that could be printed by the student. New tools and procedures were explored to address file management and feedback issues. And finally, you can never be too specific. Even when you think you have included information for every possible detail --there are always more questions. Therefore instructions are reviewed and modified prior to redelivery.

An online course is like a living organism that continues to adapt to new challenges. As a designer, developer, and instructor for an online course one must adapt to meet these new challenges.

Figure 1: Screenshot of Homepage for CIED 7060 course built using WebCT 3.6 Standard Edition



Figure 2: Screenshot of Lesson page for CIED 7060 course built using WebCT 3.6 Standard edition

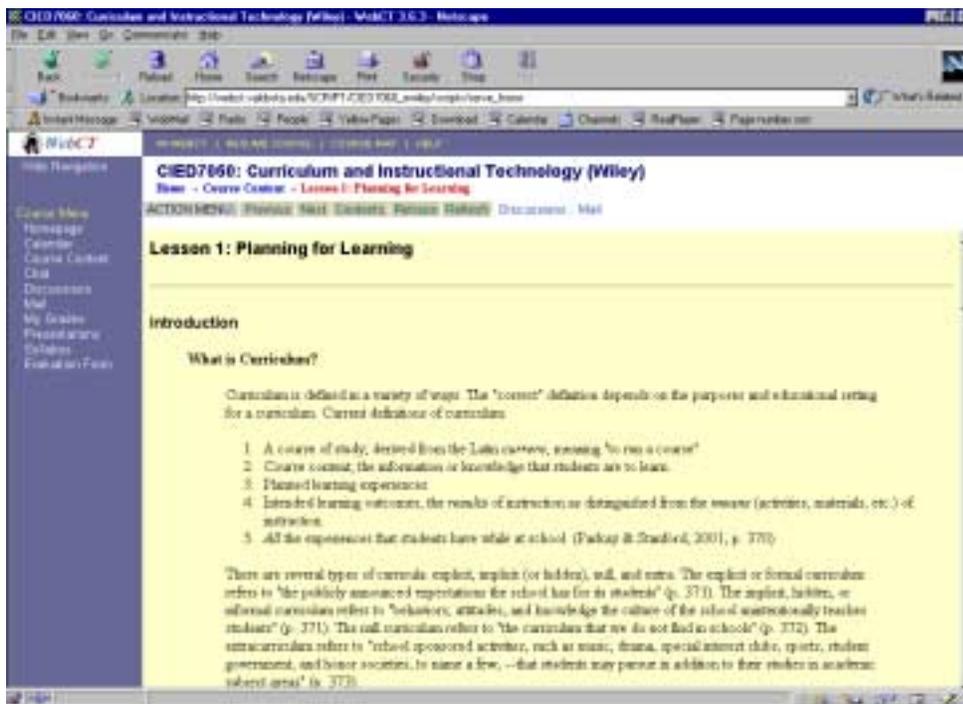


Figure 3: Screenshot of Course Content page for CIED 7060 course built using WebCT 3.6 Std Edition



References

- ¹ Valdosta State University 2000-2001 Graduate Bulletin (Valdosta: Valdosta University Graduate School Publications), 139.
- ² Dodge, Bernie. 2001. Some Thoughts About WebQuests. San Diego, CA: San Diego State University 1997, [cited 29 July 2001]. Available for World Wide Web: http://edweb.sdsu.edu/courses/edtec596/about_webquests.html
- ³ Starr. 2000. Meet Bernie Dodge -- the Frank Lloyd Wright of Learning Environments! Wallingford, CT: Education World, Inc. [cited 25 April 2002]. Available for World Wide Web: < http://www.education-world.com/a_tech/tech020.shtml
- ⁴ Dodge. 2001. The WebQuest Page. [cited 25 April 2002]. San Diego, CA: San Diego State University. Available for World Wide Web: <http://webquest.sdsu.edu>
- ⁵ Berger, Pam. 1999. ICONnect, You Connect, We All Connect. *Multimedia Schools*, 6 (4): 22.
- ⁶ Dodge, Bernie. 2001. WebQuest Taskonomy: A Taxonomy of Tasks. San Diego, CA: San Diego State University 1999. [cited 29 July 2001]. Available for World Wide Web: <http://edweb.sdsu.edu/webquest/taskonomy.html>

- ⁷. American Association of School Librarians and Association for Educational Communications and Technology. 1998. *Information Power: Building Partnerships for Learning*. Chicago: American Library Association.
- ⁸. March, Tom. 2000. The 3 R's of WebQuests. *Multimedia Schools*, 7 (6): 62.
- ⁹. American Association of School Librarians and Association for Educational Communications and Technology, p. 8.
- ¹⁰ Lanza, Levin, and Decker. 2001. Adventure into the Unknown... A WebQuest on the Lewis and Clark Expedition. Richmond, VA: University of Richmond 2001, [cited 25 April 2001]. Available for World Wide Web: <http://www.richmond.edu/academics/a&s/education/projects/webquests/lewisclark/>
- ¹¹. American Association of School Librarians and Association for Educational Communications and Technology, p. 8-9.
- ¹². American Association of School Librarians and Association for Educational Communications and Technology, p. 8-9.
- ¹³. Foret, Katherine and Weber, Kristin. 1999. Rewriting Romeo and Juliet. Richmond, VA: University of Richmond 2001, [cited 29 July 2001]. Available for World Wide Web: <http://www.richmond.edu/~ed344/webquests/shakespeare/>
- ¹⁴. American Association of School Librarians and Association for Educational Communications and Technology, p. 8-9.
- ¹⁵. American Association of School Librarians and Association for Educational Communications and Technology, p. 8-9.
- ¹⁶. Brooks, Susan and Byles, Bill. 2001. Butcher, Baker, Candlestick Maker...what will my next career be? Memphis, TN: Internet4Classrooms, 2001, [cited 29 July 2001]. Available for World Wide Web: <http://www.internet4classrooms.com/career.htm>.
- ¹⁷. American Association of School Librarians and Association for Educational Communications and Technology, p. 8-9.
- ¹⁸. Berger, Pam. 1999. ICONnect, You Connect, We All Connect. *Multimedia Schools*, 6 (4): 22; American Association of School Librarians and Association for Educational Communications and Technology, p. 8-9; and Valdosta State University 2000-2001 Graduate Bulletin, p.139.
- ¹⁹ Bellofatto, Bohl, Casey, Krill, and Dodge. A Rubric for Evaluating WebQuests. [cited 25 April 2002]. Available for the World Wide Web: <http://edweb.sdsu.edu/webquest/webquestrubric.html>.
- ²⁰. Microsoft® *FrontPage*® 2000