Return to The WebQuest Page

Some Thoughts About WebQuests

Bernie Dodge, San Diego State University

There are already thousands of schools connected in some way with the internet, and the number is increasing geometrically. There is no agreed upon terminology for the kinds of instructional activities they are creating for themselves, and the field would benefit from having a few clear categories to describe the new forms of learning environments now opening up to us. The purpose of this short paper is to give a name to what we're doing in EDTEC 596 and for the early stages of the Ed First Partnership and to propose a set of desirable attributes for such activities.

Definitions

A WebQuest is 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. There are at least two levels of WebQuests that should be distinguished from one another.

Short Term WebQuests

The instructional goal of a short term WebQuest is knowledge acquisition and integration, described as Dimension 2 in Marzano's (1992) Dimensions of Thinking model. At the end of a short term WebQuest, a learner will have grappled with a significant amount of new information and made sense of it. A short-term WebQuest is designed to be completed in one to three class periods.

Longer Term WebQuest

The instructional goal of a longer term WebQuest is what Marzano calls Dimension 3: extending and refining knowledge. After completing a longer term WebQuest, a learner would have analyzed a body of knowledge deeply, transformed it in some way, and demonstrated an understanding of the material by creating something that others can respond to, on-line or off-. A longer term WebQuest will typically take between one week and a month in a classroom setting.

Critical Attributes

WebQuests of either short or long duration are deliberately designed to make the best use of a learner's time. There is questionable educational benefit in having learners surfing the net without a clear task in mind, and most schools must ration student connect time severely. To achieve that efficiency and clarity of purpose, WebQuests should contain at least the following parts:

1. An **introduction** that sets the stage and provides some background information.
2. A **task** that is doable and interesting.
3. A set of **information sources** needed to complete the task. Many (though not necessarily all) of the resources are embedded in the WebQuest document itself as anchors pointing to information on the World Wide Web. Information sources might include web documents, experts available via e-mail or realtime conferencing, searchable databases on the net, and books and other documents physically available in the learner's setting. Because pointers to

resources are included, the learner is not left to wander through webspace completely adrift.
4. A description of the **process** the learners should go through in accomplishing the task. The process should be broken out into clearly described steps.
5. Some **guidance** on how to organize the information acquired. This can take the form of guiding questions, or directions to complete organizational frameworks such as timelines, concept maps, or cause-and-effect diagrams as described by Marzano (1988, 1992) and Clarke (1990).
6. A **conclusion** that brings closure to the quest, reminds the learners about what they've learned, and perhaps encourages them to extend the experience into other domains.

Some other non-critical attributes of a WebQuest include these:

1. WebQuests are most likely to be **group activities**, although one could imagine solo quests that might be applicable in distance education or library settings.
2. WebQuests might be enhanced by wrapping **motivational elements** around the basic structure by giving the learners a role to play (e.g., scientist, detective, reporter), simulated personae to interact with via e-mail, and a scenario to work within (e.g., you've been asked by the Secretary General of the UN to brief him on what's happening in sub-Saharan Africa this week.)
3. WebQuests can be designed within a **single discipline** or they can be **interdisciplinary**. Given that designing effective interdisciplinary instruction is more of a challenge than designing for a single content area, WebQuest creators should probably start with the latter until they are comfortable with the format.

Longer term WebQuests can be thought about in at least two ways: what thinking process is required to create them, and what form they take once created.

Thinking skills that a longer term WebQuest activity might require include these (from Marzano, 1992):

1.	Comparing:	Identifying and articulating similarities and differences between things.
2.	Classifying:	Grouping things into definable categories on the basis of their attributes.
3.	Inducing:	Inferring unknown generalizations or principles from observations or analysis.
4.	Deducing:	Inferring unstated consequences and conditions from given principles and generalizations.
5.	Analyzing errors:	Identifying and articulating errors in one's own or others' thinking.
6.	Constructing support:	Constructing a system of support or proof for an assertion.
7.	Abstraction:	Identifying and articulating the underlying theme or general pattern of information.
8.	Analyzing perspectives:	Identifying and articulating personal perspectives about issues.

The forms that a longer term WebQuest might take are open to the imagination, since we have few existing exemplars to go by. Some ideas:

1. A searchable database in which the categories in each field were created by the learners.

2. A microworld that users can navigate through that represents a physical space.

3. An interactive story or case study created by learners.

4. A document that describes an analysis of a controversial situation, takes a stand, and invites users to add to or disagree with that stand.

5. A simulated person who can be interviewed on-line. The questions and answers would be generated by learners who have deeply studied the person being simulated.

Putting the results of their thinking process back out onto the internet serves three purposes: it focuses the learners on a tangible and hi-tech task; it gives them an audience to create for; and it opens up the possibility of getting feedback from that distant audience via an embedded e-mail form.

Examples

One example of a short term WebQuest is the WebQuest 1 exercise that EDTEC 596 students completed a month ago. The goal was to give them a sense of how Archaeotype, a simulated archaeological dig, was conceived and implemented at two very different school sites. The exercise took about 2 hours and involved students working in groups to answer a series of questions. They were given a set of resources to read and interact with which included project reports and theoretical papers on the Web, copies of a portion of the Archaeotype documentation, and directions to go to another room and interact with a teacher at Juarez-Lincoln via video conference, or with a staff member at the Dalton School in New York via speakerphone. The students broke up into groups to experience each of these sources of data and then spent time telling each other what they'd learned. The end result was that each person in the class could explain what Archaeotype was and what problems and successes came with its implementation.

Another example of a short term WebQuest is WebQuest 2 in which the student teachers examined a number of web pages put up by schools. The point of the exercise was to expose them to a variety of ways in which a school could portray itself on the web in preparation for their creating the O'Farrell web pages. By the end of the exercise they were able to articulate general principles of good and not-so-good design for school web sites.

(I'm still looking for examples of a long term WebQuest and am eager to receive any suggestions.)

Design Steps

Learning to design WebQuests is a process that should go from the simple and familiar to the more complex and new. That means starting within a single discipline and a short-term WebQuest and then moving up to longer and more interdisciplinary activities. Here are the recommended steps:

1. The first stage for a teacher in learning to be a WebQuest designer is to become familiar with the resources available on-line in their own content area. Toward that end, we've prepared a Catalog of Catalogs of Web Sites for Teachers. This provides short list of starting points for exploration broken down by subject matter discipline.

2. The next step is to organize one's knowledge of what's out there. Spending a few hours on Non-WebQuest 3 will guide the teacher in organizing the resources in their discipline into categories like *searchable database*, *reference material*, *project ideas*, etc.

3. Following that, teachers should identify topics that fit in with their curriculum and for which there are appropriate materials on-line.

4. A template is available that guides the teacher through the process of creating a short-term, single discipline WebQuest.

By late April, we'll have multiple examples of these WebQuests available here while the students in EDTEC 596 move on to develop interdisciplinary WebQuests. The description of the design process for those more elaborate activities will be made available here on SDSU EdWeb as well.

References

Clarke, J. H. (1990). Patterns of thinking: Integrating learning skills in content teaching. Needham Heights MA: Allyn and Bacon.

Marzano, R. J., Brandt, R.S., Hughes, C.S., Jones, B. F., Presseisen, B, Z., Rankin, S. C., & Suhor, C. (1988). *Dimensions of thinking: A framework for curriculum and instruction.* Alexandria VA: Association for Supervision and Curriculum Development.

Marzano, R. J. (1992). *A different kind of classroom: Teaching with dimensions of learning.* Alexandria VA: Association for Supervision and Curriculum Development.

This is Draft 1.03, written in February, 1995 and last updated on May 5, 1997.

Any thoughts to add to these will be warmly welcomed. Please send feedback to bdodge@mail.sdsu.edu.

Return to The WebQuest Page