Preparing Teachers to Use Technology: The Webquest in the Secondary English Language Arts Methods Classroom

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Melinda C. Dobson

ENTITLED PREPARING TEACHERS TO USE TECHNOLOGY: THE WEBQUEST
IN THE SECONDARY ENGLISH LANGUAGE ARTS METHODS CLASSROOM
AS PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE

DEGREE OF Doctor of Philosophy

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Melinda C. Dobson

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CHAPTER I

WHAT IS A WEBQUEST?

As an instructor of preservice English teachers, I became interested in technology, and ultimately the WebQuest, after realizing the potential impact of Web-based education on pedagogy and learning. I wondered how teachers were using computer technology in their classrooms and what impact technology might have on learning in the future; and therefore, how my preservice teachers should be prepared to use technology in their own classrooms. Was the “Net Generation,” as Donald Tapscott claims about the children of today, in fact using the computer and the Internet for entertainment, learning, communicating, shopping, and a host of other things (Tapscott 4-5)? Would students who didn’t have access to or practice with computers “be developmentally disadvantaged” as he claimed (7)? How would the Internet impact teaching and learning in English language arts?

Now, after researching the role of technology and the Internet on teaching and learning, I believe that teachers do need to know how to teach with the Internet. The United States Commerce Department reported that in 2000, nearly half of homes had a computer and that 41.5% of homes had Internet access. Increases, although some were only small, were seen at all social, economic, and age levels (United Falling). Clearly, both of these indices will continue to grow. The Internet is already shaping students’ lives, interests, and learning styles; therefore, effective teachers will tap into Web-based learning. Tom March, university professor and one of the first WebQuest creators, believes that
The impact of the Internet and the World Wide Web on popular culture is not hard to measure. Tally the jargon that's made it into our everyday language: 'Net-surfing, info superhighway, Web site, chat room, cyber, browser, online, homepage, HTML and @. If the Web has reached such broad public awareness, how do you think it's touched the lives of our trend-tracking students? In fact, people have begun referring to today's students as Generation Dot Com. So even if the Web bore no educational value, we as teachers would need to come to terms with it to understand our students' world and frame of reference. The good news is that the Web is not just helpful to education, but, used effectively, it can revolutionize student learning.

March's analysis leads one back to a fundamental question: How can teacher educators, such as myself, help preservice teachers use the Internet in educationally sound ways? What kind of activities can teachers develop to "revolutionize student learning?"

My first attempt at integrating Web-based learning into preservice teacher education was in my class, Teaching Literature in the Secondary School (English 480), the capstone course for English Majors in the Secondary English Curriculum at Western Michigan University, one of the largest teacher education universities in the country. I asked preservice teachers to create interactive poetry assignments on the Web for their future secondary students. First, their students would read three teacher-selected poems that had teacher-created hypertext links to images, ideas, definitions, critical theory, criticism, author information, etc. that fit with the poems. Second, their students would have to complete a creative activity from a list of teacher supplied possible activities. Lastly, their students would share their final products with others in the class. When designing the assignment, I wanted to ensure that preservice teachers wouldn't be creating lessons that would have their students just read the poems and answer questions. By allowing their students to follow the
teacher-created hypertext links, these new teachers would be encouraging their students to make meaning of poetry through a variety of strategies. Student choice would be instrumental in this process. They could choose which hypertext links to follow. They could choose to follow hypertext links within the documents they had already hyperlinked to. Ultimately, they would use a wide variety of Internet resources to facilitate their reading of the poem. As my students discussed the value of the activity, these preservice teachers cited the advantages of being able to tailor the assignment to students of different abilities, and they were excited about how the assignment went beyond traditional textbook work. The following quotations, which were written on our class electronic conference, demonstrate that these preservice teachers were critically thinking about content and teaching issues and how they were using the Internet.

• While creating my Interactive Poetry Activity, I tried to keep in mind that some students will have visual problems and others will have language comprehension problems, thus I tried to use various neutral colors and give explanations of words that might be rather troublesome or hard to understand.

• I am not a very big fan of poetry, but I really feel that interactive poetry lessons could help a lot of kids enjoy poetry more. I think they're beneficial in the fact that they allow students to go to a link in a poem when something is confusing or important. I really feel that this type of activity (one that encourages students to explore beyond the poem) challenges the student to learn more. I think interactive poetry assignments would be fun also and of course anything that is meaningful or fun is more easily remembered by students. Web page assignments are fun and creative ways for students to get practice with technology, do something they enjoy (playing on the computer) and learn all at the same time.

• Personally, I really enjoyed creating the interactive poetry assignment... Students could perhaps even write their own poetry and then connect images, words, information about their word choice on the internet. I found this activity particularly interesting because it was interactive and surprisingly
easy to get involved in….I believe that students would like the chance to read each others’ poetry and make it a fun interactive activity!”

I agreed with these preservice teachers’ assessments of the interactive poetry assignment. Teachers can meet all of their students’ learning needs by tailoring the layout and content of the activity. In addition, assignments could be made that ask students to go beyond just reading the poem and telling what it is about. For example, one preservice teacher suggested that students create their own hypertext poetry. These projects could potentially pull many students who dislike poetry into the poems. How many of those students would be willing to look up words they didn’t understand or background information in books? This assignment showed me that technology could provide another way, but not the only way, teachers could draw students into poetry. I was open to learning about other Web-based research activities and soon learned about WebQuests. A year later, I was ready to teach preservice teachers how to develop WebQuests.

Before introducing the concept to my students, I researched the benefits of using and the process of creating WebQuests. In 1995, Bernie Dodge asked his preservice teachers to research Archaeotype software. The Archaeotype software provided multiple resources that allowed students to work in groups as archaeologists to find and examine archaeological artifacts (“Social”). Students in Dodge’s class were to “decide whether, and how, the Archaeotype program could be used at the inner-city school at which they were teaching” (Starr). Modeling his guided research plan for his students after the software they were researching, Dodge realized that by providing varied resources, collaboration, and real-world problem solving,
discussions ensued that were more critical and exciting than any he had heard before from his students. After this lesson, he put together his own template for making WebQuests, Tom March created one, and “the idea began to catch on” (Starr).

Dodge maintains a Web site for those interested in learning more about, creating, or using WebQuests at http://webquest.sdsu.edu/. On this site he provides rationale for using WebQuests, detailed descriptions of each step of the process, and different levels of examples of WebQuests. The homepage includes two important links: one to training materials and one to a recently updated organizational page for WebQuests called “Portal.” The “Training” page has especially helpful information including articles about the creation of the WebQuest and why the WebQuest helps students learn, links to pages that help the creator with specifics about creating a good task, rubrics, scaffolding, etc., and workshops that promote WebQuest creation. This section provides 32 sources of information. Linked in June of 2003, “Portal” provides a new structure for the WebQuest page. Major differences include a place for online conversations on topics such as creating, using, and researching WebQuests and a different way of categorizing WebQuests linked to Dodge’s site. Now, users can access highly-rated, middle-rated, and new WebQuests. WebQuests from each level cover nearly every subject possible and every grade level; however, the majority of WebQuests address English, Social Studies, or Science topics in grades 3-12. As the following chart demonstrates, between June of 1998 and March of 2000, the interest in WebQuests has increased dramatically.
The WebQuest site saw a 900% increase in hits per day in less than 2 years. In September of 2003, over 4.5 million hits had been recorded since February 28, 1998 (Dodge WebQuest Page). People are clearly interested in what this Web-based activity can offer.

Because I think that Dodge’s model, which asks individuals and groups to complete challenging activities using the Internet, offers a sound framework for using Web-based learning, I will focus almost exclusively on examples from his site. For the purpose of this dissertation, any reference to the WebQuest applies to the Dodge model. Dodge defines the WebQuest as

an inquiry-oriented activity in which most or all of the information used by learners is drawn from the Web. WebQuests are designed to use learners’ time well, to focus on using information rather than looking for it, and to support learners' thinking at the levels of analysis, synthesis and evaluation. ("Site")

Dodge also believes that students should work in cooperative groups, though many of the examples included on his site are not collaborative in nature. Some WebQuests have students divide up the work on their own or some have students working
independently. Typically, WebQuests are divided into 6 sections: introduction, task, process, resources, evaluation, and conclusion. In the introduction the teacher sets the scene for the impending task, trying to capture students' attention. The task section clearly states what the final product will be. The process section details the steps students will take to complete the product. Within this section, scaffolding, or guidance in the form of templates, visual organizers, or aids, helps students reach the goal. Usually organized around the themes to be researched or the students' assigned roles in the project, the resource section includes previewed Web sites and other media, both print and non-print, for students to use to do their research. The evaluation section usually contains checklists and/or rubric criteria for assessment. Finally, the conclusion section restates what should have been accomplished in the WebQuest and prompts students to reflect upon the process as a way to think about future learning.

Although each section is important, an authentic and compelling task and a well-designed process for completing the task are essential to a successful WebQuest. Before creating a WebQuest, these three questions should be answered:

1. What do students need to learn?
2. How should students learn?
3. How do I design a WebQuest to meet these goals?

Implicit in these three questions is the assumption that learning goals and process take precedence over technology applications. A teacher shouldn't create a WebQuest just for the sake of using computers. Indeed, Dodge believes that the technology aspects, while important, aren't as important as "being a good teacher" (Starr). Therefore,
teachers who create WebQuests should first focus on content knowledge and pedagogy, not technology. Following Dodge's model, though, allows teachers to utilize student-centered learning, cooperative learning, the development of higher-order thinking skills, and rubric assessment to learn selected skills or information via a highly engaging technology that opens the resources of the Internet.

How then do teachers create a task that captures their students' attention and challenges them? Project-Based Learning and Problem-Based Learning, both known as PBL, can provide help. Since both apply to the WebQuest, I'll give a short explanation of each. Though not all WebQuest tasks require that students solve a problem, theories of problem-based learning can help create meaningful tasks with which students can engage. Problem-based learning has three main characteristics:

It engages students as stakeholders in a problem situation. It organizes curriculum around this holistic problem, enabling students to learn in relevant and connected ways. And, it creates a learning environment in which teachers coach student thinking and guide student inquiry, facilitating deeper levels of understanding. (qtd. in Sage)

Frequently, a WebQuest task requires students to solve a complex, multi-layered problem with a variety of rich and sophisticated solutions and products. Instead of looking for just the "right answer," students are encouraged to collect and process information in assigned roles and convene with the rest of their group to come up with viable solutions. "PBL is also a natural means of integrating technology. Just as adults often consult experts, search the Internet, locate books, talk to friends, and compile and organize information to solve a problem, so do students in PBL investigations" (Sage). WebQuests draw on problem-based learning models to provide pedagogically rich learning activities.
In project-based learning, students produce projects as a part of their learning process or as a result of it. Conditions under which students complete projects are often the same as problem-based learning – students construct their own knowledge, often in groups, and see the teacher as coach rather than information-giver. Also, project-based learning may connect to problem-based learning when projects are the final product of the problem to be solved. These creative projects call for authentic assessment. Authentic assessment suggests that students are asked to learn and grapple with real-world issues and show their understanding through something other than a traditional test (multiple choice, true/false, fill-in the blank, etc.). Rather than receiving a score based on number of answers correct, student projects are graded using rubrics that list specific criteria their projects should meet. Authentic assessment does not mean that students receive As for anything they turn in. Grant Wiggins believes that

[assessment is authentic when we directly examine student performance on worthy intellectual tasks... require students to be effective performers with acquired knowledge.... present the student with the full array of tasks that mirror the priorities and challenges found in the best instructional activities.... attend to whether the student can craft polished, thorough and justifiable answers, performances or products..... involve "ill-structured" challenges and roles that help students rehearse for the complex ambiguities of the "game" of adult and professional life.

Teachers who use WebQuests ask students to work through challenging tasks to produce a product that they can authentically assess using rubrics and checklists.

Once the task has been identified, the WebQuest must be designed. Several WebQuest design patterns have been identified, but I’ll describe five identified by Dodge that I believe work especially well with English language arts curriculum:
“Behind the Book”, “Beyond the Book”, “Compilation”, “Persuasive Message”, and “Collaborative Design”.

In “Behind the Book” WebQuests, students study information about a piece of literature’s setting. For example in “The Salem Sentinel” created by teacher Sara Kajder, students research Salem in the 1600s in order to better understand the events of The Crucible. The students’ task is to create articles and ultimately a newspaper based on the life and times of the Massachusetts Colony residents. Objectives for the project include analyzing and evaluating historical documents, applying a perspective from the 1600s, and synthesizing all of this information into a newspaper. In roles as editor in chief, layout editor, copy editor, and research editor, students work to complete the paper as a team, each responsible for his/her own part and for the entire creation.

In “Beyond the Book” WebQuests, students expand their knowledge of a piece of literature by “extending it beyond what was originally written or by mapping it onto an entirely different domain” (Dodge “Beyond”). For example in “Rewriting Romeo and Juliet”, teachers Katherine Foret and Kristin Weber ask students to update a scene from the play based on one of the following time periods: the Wild West, 1920’s Chicago, 1950’s suburbia, or the 1960’s. Students have to analyze the Shakespearean and target time periods, synthesize that information by changing the scene, and evaluate their own and others’ performances of the scenes.

“Compilation” WebQuests ask students to gather and evaluate information in order to determine whether or not particular information should be included in a final product. In “Threads of Change in the 19th Century America” by Vicki Seed, students
individually research romanticism, transcendentalism, abolitionism, feminism and industrialism to pick one piece of art, literature, music, artifact, etc. that embodies their “-ism.” Then they meet in groups to compile a 19th century exhibit presentation to give to the Smithsonian, hoping that their exhibit will be chosen to be displayed in the museum. Students must carefully evaluate a variety of sources in order to choose the most representative piece of their “-ism.” In addition, they must synthesize the different information they found to form a cohesive group presentation.

“Persuasive Message” WebQuests like April Moore’s “Studying the Background of Arthur Miller’s The Crucible” ask students to do thorough research on both sides of a controversial issue to form an opinion that they can support. After reading a poem about the Japanese internment camps from World War II, Moore’s students are asked to research the Salem Witch Trials, McCarthyism, and other “witch hunts” in history. Their task is to write a letter to the editor explaining how accusing innocent people of crimes can be prevented in the future. Students choose between roles of experts on the witch trials, McCarthyism, other “witch hunts,” or Power Point Presentations. Each role has specific duties and a rubric to which students can refer to make sure they have completed their roles well. Finally, in the conclusion, students are asked to question the viability of their solutions to the problem of innocent people being accused of crimes.

As a last example, the “Collaborative Design” WebQuest assigns roles of differing perspectives to students and asks them to come to a consensus about whatever problem they face. Jonnie Wallis and Goehrig Orr’s “Banned Books Quest” asks students to take on the points of view of a concerned citizen, a school
library media specialist, a lawyer and a public librarian to address the issue of banned books. After researching their respective positions and drafting their own position statements, the group of four meets to reach consensus about the information they intend to present to the school board. Students are assessed on their individual contributions and how their team worked together.

The abovementioned examples are by no means comprehensive, and there are many other ways of making WebQuests; however, the examples demonstrate important goals for student learning. They all require careful Web research by asking students to analyze, synthesize, or evaluate resources to construct their final product. In all of these examples, students have to work both independently and with their groups to finish their tasks. In addition, students create final projects like newspapers, reworked scenes from plays, presentations for a "museum," letters to the editor, and presentations for a "school board" rather than taking tests. The process of their learning is just as important as completing their task.

Moving from the interactive poetry assignment to the WebQuest allowed me to do just what the WebQuest allows teachers to do for their students, use sound educational practices to help preservice teachers learn methods course content while also using technology. Chapter II provides a brief look into the learning theory applicable to WebQuests and serves as a foundation for the rationale to use WebQuests. In Chapter III, I describe how my first attempt at creating a WebQuest helped me to better understand how much work and revision is needed to create a truly successful WebQuest. Chapter IV addresses how to incorporate technology into the methods course. In Chapter V, I analyze the process of teaching preservice
teachers to create WebQuests in three separate English language arts methods
courses. In Chapter VI, I examine how experienced teachers and WebQuest creators
use WebQuests in their classrooms. Chapter VII reviews the success of my research
by briefly looking at how three of my preservice teachers were able to use WebQuests
in their intern teaching. The argument of this dissertation moves from my own
experience toward that of the preservice teachers I have trained in technology-
supported learning to the use of WebQuest strategies in real-world classrooms. My
preservice teachers' positive attitudes after creating WebQuests and my analysis of
their processes and products parallel those of experienced WebQuests users:
WebQuests take work, time, and practice to create, but the benefits to students using
them are substantial.
CHAPTER II

LEARNING THEORY AND WEBQUESTS

Whether or not they are explicitly acknowledged, all instructional practices are based on models of learning. While the WebQuest is founded on the constructivist idea that students learn best when they construct their own meaning from a variety of complex stimuli and information, the WebQuest also draws on other models of learning. This chapter traces how certain aspects of behaviorism, cognitivism, and constructivism have influenced the WebQuest. My discussion of the different learning theories is based on the works of particular key theorists and does not attempt to be fully comprehensive but rather demonstrate the sound cognitive and pedagogical foundations of the WebQuest activity.

Behaviorism and Computer-Assisted Instruction

Although most comparisons of behaviorism and constructivism put them at opposite ends of the continuum, WebQuests have been influenced by both approaches. One of the most well-known behaviorists, B.F. Skinner carefully studied the effects of environment on both humans and animals. From his observations, he concluded that a subject's behavior could be affected by controlling the environment. Known as the theory of operant conditioning, Skinner's approach explained the importance of positive and negative reinforcement on controlling behavior. Tiene
and Ingram describe the lasting effects on education of this work as behavioral objectives and programmed instruction.

Behaviorists believed that by stating clearly what behavior would be expected of students in the form of objectives, learning goals could be more easily and effectively reached. Because they were not interested in the abstract mental processes’ effects on behavior, manipulation of the environment was considered key to learning. After stating the behavior to be accomplished, the conditions under which it would be accomplished and the degree of success expected, teachers could clearly mark the progress of their students. Positive aspects of behavioral objectives are that teachers plan instruction toward specific observable outcomes. In addition, cognitive objectives as outlined in Benjamin Bloom's Taxonomy of Educational Objectives encourage the building of more complex skills through the levels of knowledge, comprehension, application, analysis, synthesis and evaluation. WebQuest tasks typically emphasize the three highest levels, also known as higher-order thinking skills. When they explicitly address these levels, teachers create tasks that intellectually challenge their students rather than ask them just to recall knowledge or choose a correct answer from supplied choices.

Programmed instruction (PI) and Mastery Learning also stem from behaviorists beliefs. PI and Mastery Learning have students working systematically through material to be learned in a unit. Students can branch in one of two ways: 1) Students who complete work correctly can progress quickly to the end of the material. 2) Students who make mistakes must complete remedial work until the material is mastered. PI and Mastery Learning differ in that PI students continue to work
through units regardless of where the rest of the class is working. With Mastery Learning, students usually engage in enrichment activities until everyone has mastered a particular unit before progressing. Farrell cites studies that show Mastery Learning allows most students to learn the basic curriculum, but that “criticism has been advanced that the programs are overly structured, even mechanistic...giving too little attention to creativity” (66). Although students can work individually with regard to time, PI and Mastery Learning may not provide individual content consideration from which students benefit. Program creators pick out the material and the sequence of activities, and often teachers have no control over content. Student choice in learning certainly is not a factor.

In the realm of technology enriched education, the effects of behaviorism first showed up in computer-assisted instruction (CAI). Early CAI differs from PI and Mastery Learning only because students use computers rather than books or workbooks to progress through units. Picture students sitting in front of computers, staring at the screen, answering questions, and progressing through lessons step-by-step. The only interaction they have is with the computer, not with the teacher or other students. The learning is minutely task organized in a highly systemic and progressive fashion. Though some touted the use of such programs as a way to free teachers for more interaction with students, some technology experts believed computers could eventually replace teachers in some subjects. However, teachers resisted this type of instruction, and the high costs of computers and of development of the CAI programs hindered the success of CAI in the 1950s and 60s.
Although they utilize some elements of PI and Mastery Learning, WebQuests allow for more student independence and creativity. WebQuest creators do select the material students will access and do provide a sequence of activities for students to follow. Creators must search out credible Internet resources that allow students to gain the information needed to complete the WebQuest. In addition, clear steps guide students through the process of the WebQuest so that they spend as little time as possible wondering what they are to do next and how they are going to do it. The creator’s ultimate goal is to simplify the process of the WebQuest so that students can concentrate on the content and process of learning, not on how to do the WebQuest. However, this structure leads to student independence. The resources and steps form a base from which students start. In addition, unlike PI or Mastery Learning program developers, teachers can tailor resources and process sections to meet the diverse needs of their current students. Because WebQuest tasks usually ask students to synthesize, analyze, or evaluate information, right or wrong answers are rarely the expected final product. Students have the freedom to manipulate information into their version of the final product. In addition, the non-linear fashion of the Internet allows students to access information beyond what the WebQuest provides.

The WebQuest also differs considerably from early CAI software. Though a computer may have more color, animation, sound, etc., CAI software wasn’t much different than the PI booklets. CAI programs that follow programmed instruction methods didn’t account for individual differences other than providing corrective practice based on a students’ incorrect answers. Rather than making a one-size-fits-all program, WebQuests pose problems that usually have no prescribed answer and
will meet the needs of a varied audience. One such WebQuest, Josephine Zarro’s “eGallery of Tragic Heroes in Literature and Life,” asks students to provide graphic representations of characters, write summaries of the heroes’ lives, and argue for their inclusion in a list of heroes. This activity gives students of different abilities the opportunity to shine. Students are asked to provide artwork in some form, summarize information, and persuade others to accept their proposal. Bernie Dodge states, “I liked the idea of being both planful and creative about helping people learn [with WebQuests]” (Starr). Early CAI programs treated all students alike and were typically less creative.

Cognitivism and the First Steps toward WebQuests

As with behaviorism, the WebQuest is both influenced by and works against tenets of cognitivism. When behaviorism waned in the 1970s with the advent of cognitivism, psychologists studied the importance of students’ mental processes when learning, focusing on the importance of long and short term memory, prior knowledge and schemata, active processing and practicing of information, and application of knowledge “in meaningful real-world contexts” (Tiene and Ingram 30). Just as behavioral objectives may influence the development of a higher-order thinking WebQuest task, the importance of cognitive mind structures influences the overall structure of the WebQuest and specifically the process section of the WebQuest. The steps and scaffolding teachers provide in the process section channel students’ work and thinking. However, unlike the highly structured environments proposed by cognitivists, the WebQuest allows for greater student freedom.
Cognitivists study mental processes to determine how students can learn best. They believe that prior knowledge and schema work together to help students retain information in long term memory. A teacher's main focus becomes to devise ways in which information to be learned moves from short to long term memory because short term memory has limited space and time of retention. By activating a student's prior knowledge and schema, teachers can direct the acquisition and retention of new information. Teachers encourage students to recall information applicable to the lesson they are about to experience. For example, when beginning the novel *To Kill a Mockingbird*, students might describe elements of Southern life or talk about racial tension to activate their prior knowledge. The theory behind this activity has to do with schema. The brain is made up of "filing cabinets" that store information in long term memory. In order to process new information, it must find its way to an appropriate cabinet. If I asked you to close your eyes and imagine a candle, I doubt that everyone would visualize the exact same candle, but everyone would probably envision a waxy material containing a wick for lighting. The brain relies on the "cabinet" that stores information on candles. Within that cabinet, many different shapes, sizes, colors, types, etc. of candles exist in the files. So, to understand new information, students have to be encouraged to open their applicable, existing cabinets, or prior knowledge, to process new information.

Several theories of lesson design emerged from these theories. The teacher may develop lesson plans similar to Robert Gagné's "Nine Events of Learning" or Madeline Hunter's "Instructional Theory into Practice." The table below lists the steps to be used when planning lessons.
Table 1

Lesson Planning Steps

<table>
<thead>
<tr>
<th>Robert Gagné's Nine Events of Learning</th>
<th>Madeline Hunter's Instructional Theory into Practice</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gaining attention</td>
<td>Objectives</td>
</tr>
<tr>
<td>Informing learners of the objective</td>
<td>Standards</td>
</tr>
<tr>
<td>Stimulating recall of prior learning</td>
<td>Anticipatory set</td>
</tr>
<tr>
<td>Presenting the stimulus</td>
<td>Teaching: Input</td>
</tr>
<tr>
<td>Providing learning guidance</td>
<td>Modeling</td>
</tr>
<tr>
<td>Eliciting performance</td>
<td>Checking for understanding</td>
</tr>
<tr>
<td>Providing feedback</td>
<td>Guided practice/monitoring</td>
</tr>
<tr>
<td>Assessing performance</td>
<td>Closure</td>
</tr>
<tr>
<td>Enhancing retention and transfer</td>
<td>Independent practice</td>
</tr>
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By following Gagné’s or Hunter’s steps, the teacher provides the learner with the tools for successfully understanding material. Prior knowledge is accessed so that the student may utilize existing knowledge to understand new knowledge. The teacher plans activities for the student that will encourage new information to be processed by existing schema. Finally, after providing the help necessary, the teacher assesses the student’s performance in light of the stated objective.

The WebQuest acknowledges the importance of these issues but in a more student-centered way. Once the WebQuest has been created, teachers remove themselves as primary information givers. Students become responsible for accessing the resources to construct their own knowledge. Compare the sequence of learning to those in Table 1 above:

introduction
Like "gaining the attention" and "anticipatory set," the introduction motivates students to undertake their impending task. Examples include asking students to become theme park inventors (Adams), city council members ("Wringer"), or magazine creators (Labor). The task clearly identifies the final product. The process section, though, provides the most guidance for students' learning. Scaffolding can mean the difference between a good WebQuest and a great WebQuest according to Dodge. He defines scaffolding as "a temporary structure that's used to help learners at [a] particular part of the learning process. It's specific and it's temporary" ("General"). For example in "Witchcraft of Witchhunt" by Deborah Jacobs, students can take on the role of either accused witch or accused communist. The task is to create a 7-day journal documenting the students' experiences in a historically correct way. Later, students compare the two roles in a Power Point presentation. Finally, they write articles describing their assumed characters' trial and verdict. Scaffolding in this WebQuest includes a guide for Internet research, a chart for possible journal entries, a link to how to write in a journal, links to how to set up comparisons, instructions on how to make a chart, and finally, tips for writing an article. The creator has to decide, however, how much guidance to provide. It's a careful balance between knowing what students need and controlling their every move. As students become more familiar with the process of the WebQuest and its accompanying activities, they will likely need less scaffolding.
Positive aspects of cognitivism include the recognition that learners do play a role in their learning, and that the learners' prior knowledge and schema are important in terms of learning new skills. Tiene and Ingram write,

That means that we must find ways to help students link new information and skills to what they already know, put them in context, develop their own perspectives about it, and decide how meaningful this material is to them. We must also ensure that people have the opportunity to perform the new skill....”

A WebQuests introduction aims to activate students’ prior knowledge and grab their attention while the process section provides guidance in the form of scaffolding to help students organize new information into their schemas. Ideally, students have the freedom to develop a unique final product and through the conclusion gain insight into how the new skill or knowledge can be used in the future.

However, such careful planning prescribed by cognitivists can be detrimental if the teacher's plan overshadows the needs of the learner. With the Gagné or Hunter models, teachers determine the objectives and structure of the lesson. Although the teacher carefully designs the WebQuest, ultimately, the learner takes responsibility for analyzing, synthesizing, and evaluating the information in the creation of the final product. Dodge realizes that “...the benefit to them [teachers] is seeing the center of gravity of the room move to where the kids are” (Starr). With a well-designed WebQuest the centrality of the teacher lessens and the role of the learner increases.

...constructivism suggests that when students need to understand a more complex or sophisticated topic like those that comprise WebQuests, it doesn't help to serve them simplified truths, boiled down examples, or step-by-step formulas. What they need are many examples with lots of information and opinions on the topic through which they will sift until they have constructed an understanding that not only connects to their own individual prior
knowledge, but also builds new schema that will be refined when students encounter the topic again in the future. (March)

The ultimate goal of the cognitive approach to teaching is to transfer knowledge to the student through carefully planned steps, and while knowledge transfer is important in WebQuests, the ultimate goal of the WebQuest is for the learner to construct knowledge.

Constructivism and WebQuests

Although WebQuests often state or imply behavioral cognitive objectives and utilize a lesson plan design similar to those created by cognitivists, they fit most closely with a constructivist model of learning. The objectives and plans give structure and focus, but the basic WebQuest design should allow students to work independently and with peers to make their own meanings. Jean Piaget, focusing on the mental development of the learner, and Lev Vygotsky, focusing on both the mental and social development of the learner, greatly influenced constructivist theory, and therefore, the WebQuest. Because Dodge recommends that students work in cooperative groups, both individual and social dynamics affect learning. In WebQuests that follow Dodge’s model, students must be able to work independently and with others to construct knowledge.

Sometimes called a radical constructivist (Huang and Nichani 40), a social epistemologist (Kearsley “Genetic”), or cognitivist (Tiene and Ingram 31), Jean Piaget, whatever one labels him, impacted the development of constructivism with his theories about how individuals construct knowledge. Continuing with research done
by cognitive theorists on schema, Piaget carefully studied how children adapted to changes in their environments. He noted that new information had to be assimilated and/or accommodated into the child’s existing schema in order for equilibrium to be restored within the child’s brain and learning to occur.

This theory can help us see how the steps of the WebQuest work to help all students learn. To make sure that students are able to understand impending activities, the introduction activates prior knowledge and motivates students to want to complete the activity. The task, too, must be something of consequence to the student in order to make the process worth completing. If it is not, then students faced with disequilibria, or lack of assimilation or accommodation, won’t bother working to reach equilibrium. John Dewey had a similar idea and added the notion that the unmotivated or “unguided” student wouldn’t learn anything new. Although he advocated student choice, he did not mean that students should be able to do whatever they wish:

If you simply indulge this interest [in drawing] by letting the child go on indefinitely, there is no growth that is more than accidental. But let the child first express his impulse, and then through criticism, question, and suggestion [facilitation] bring him to consciousness of what he has done, and what he needs to do, and the result is quite different. (41)

In Dewey’s approach, the teacher works as a coach to help students assimilate and accommodate the new information in order to come to a higher understanding of the material studied. Finally, within the process, the teacher must provide scaffolding that allows students to assimilate and/or accommodate the new information. Left alone to figure out what they are supposed to do, some students might quit when faced with challenges. Piaget writes,
There is a much more productive form of instruction: the so-called ‘active’ schools endeavor to create situations that...evoke spontaneous elaboration on the part of the child, if one manages both to spark his interest and to present the problem in such a way that it corresponds to the structures he had already formed for himself. (11)

Because the learner has to grasp the material through these mental processes, learning activities must “actively involve students and present challenges” (Kearsley “Genetic”). Otherwise, students may not make the effort to commit process or product to long term memory.

Jerome Bruner took Piaget’s model for “active” schools a bit further and developed the idea of discovery learning. While earlier cognitive theorists began to recognize the role of the student’s mind in learning, Bruner realized that students have to be aware of how they learn: “Discovery teaching generally involves not so much the process of leading students to discover what is ‘out there,’ but rather, their discovering what is in their own heads. It involves encouraging them to say, Let me stop and think about that; Let me use my head; Let me have some vicarious trial and error” (72). Whether in the stage of working alone or in groups, students completing a WebQuest have ample opportunity to uncover and test new knowledge. In addition, because students usually don’t have to come up with just one correct answer to a problem, less pressure allows trial and error to occur more frequently. Teachers also must be careful to not ask students to “discover” the teacher’s predetermined information. Discovery learning should be viewed as “a personal construction, rather than as a discovery of what exists....Learning to learn—including the ability to ask questions, evaluate one’s strategies, and develop answers to questions in the content domain—is the goal in this view of discovery learning” (Duffy and Cunningham
Metacognition, thought about thought itself, is likely to occur as a byproduct of discovery learning as students become more proficient at and conscious of adjusting their environment to meet their needs.

Vygotsky, emphasizing the social dimension of learning, can help us understand why WebQuests can be successful cooperative learning activities. Vygotsky made a connection between thought and language. He believed that ideas and words needed each other to exist. If students don’t talk about their ideas, then the ideas become “shadow[s].” If students don’t think before speaking, then their words are “dead” (Vygotsky Thought 153). He elaborates on this idea later in Mind in Society, when describing the difference between the interpersonal and intrapersonal functions of speech. Young children, when confronted with a challenging activity that they cannot perform on their own, automatically appeal to others in their vicinity for help. If help is denied, then the children resort to egocentric audible speech to solve the problem. When children learn to internalize this speech to help them solve problems that cannot be talked through with others, they move from social (interpersonal) speech to internal (intrapersonal) speech. Thus, social interaction allows students to think aloud and formulate conclusions, and this in turn, can lead to internalization of thought processes to be applied to similar situations when students work alone later.

WebQuests, by encouraging independent work within groups allows both to happen. For example in “Radio Days,” students must produce a radio drama modeled after those heard in the 1930s and 1940s (Matzat). Each student has the individual responsibility for compiling new information in their roles as playwright, sound effects person, and advertising executive. Then, each person has to complete his/her
part of the script before meeting together as a group to finalize, practice, and perform
the script. The main component of cooperative learning, positive interdependence,
allows each student to be responsible both for his/her own work and the work of the
group.

Vygotsky’s conception of the Zone of Proximal Development (ZPD) also helps us
understand the importance of cooperative learning in WebQuests. Vygotsky defined
the zone as “the distance between the actual developmental level as determined by
independent problem solving and the level of potential development as determined
through problem solving under adult guidance or in collaboration with more capable
peers” (italics in original Vygotsky Mind 86). This concept helps explain the role of
teachers as coaches and of other students in collaborative interaction. While Piaget
felt that students should be challenged within their developmental stage, the ZPD
works under the assumption that students can learn difficult concepts if given proper
support. The WebQuest provides this support in three ways. First, teachers during its
creation have already built in scaffolding that provides “resource links, a compelling
problem or task, templates for student products, [and] guidance on cognitive and
social skills” (Dodge “WebQuests”). Second, students work with peers to accomplish
the task set before them. In group settings each person in the group may not have a
“more capable peer,” yet, the sharing of knowledge alone can be enough to help
students grapple with difficult concepts. Vygotsky believed that harder information
could be learned “when the child is interacting with people in his environment and in
cooperation with his peers” (Mind 90). Finally, the teacher may be able to work as
the “more capable peer.” Consequently, teachers should not divorce themselves from
the students once the WebQuest begins. They work with students to help them understand and complete their roles and construct final products and understandings.

Technology-based learning activities do face criticism even when they are based on sound learning theory. In “The Computer Delusion,” Todd Oppenheimer delineates a dismal history of technology use and the impact on education as proof that the computers fall under the same technological hype.

In 1922 Thomas Edison predicted that "the motion picture is destined to revolutionize our educational system and ... in a few years it will supplant largely, if not entirely, the use of textbooks." Twenty-three years later, in 1945, William Levenson, the director of the Cleveland public schools' radio station, claimed that "the time may come when a portable radio receiver will be as common in the classroom as is the blackboard." Forty years after that the noted psychologist B. F. Skinner, referring to the first days of his "teaching machines," in the late 1950s and early 1960s, wrote, "I was soon saying that, with the help of teaching machines and programmed instruction, students could learn twice as much in the same time and with the same effort as in a standard classroom." Ten years after Skinner's recollections were published, President Bill Clinton campaigned for "a bridge to the twenty-first century ... where computers are as much a part of the classroom as blackboards."

TV and movies, radio, programmed instruction, and computers have all been hyped as the cure for the problems with education. However, teacher acceptance and cost largely have prevented these innovations from working in schools even when they were well-conceived. Teachers and others worry more about their students and how to teach them most effectively than the newest trends. Clifford Stoll believes that

[i]t's easy to talk about computers' speed, memory, and novelty. More difficult to grapple with are the frustrations they generate, their costs (both obvious and indirect), and their side effects. Yet these downsides may be more important than overhyped benefits. What's lost when we adopt new technologies? Who's marginalized? What valuable things get trampled? (xii)
Larry Cuban, a wary computer advocate, thinks that “...larger social and civic goals” of American Democracy “will trump the slow revolution in teaching practices [toward constructivism]” (196-97). He believes that traditional education has supported “historical legacies in school structures and parents’ and taxpayers’ social beliefs about what schools should be doing” (196). Fundamental changes in the way students are taught cannot and perhaps should not overcome more than 200 years of educational history, and technology is not likely to become any time soon an exclusive or comprehensive way to improving student learning.

Nevertheless, technology used appropriately and for good reasons can aid student learning. We need to think carefully and critically about how technology can enhance and foster learning. WebQuests must be well-designed, of course, to be effective. Patrick O’Sullivan suggests a more balanced way of thinking about technology:

An alternative to extremes of advocacy and opposition is a balanced view of technologies, which recognizes that technologies are not inherently ‘good’ or ‘bad.’...a thorough evaluation is unlikely to be a simplistic ‘good’ or ‘bad’ dichotomy. More likely an evaluation will reveal a mixture of positive and negative potentials, and different mixtures for different applications and users. (57)

Good teachers are able to make thoughtful decisions about when to use technology to complement their learning goals. In addition, good teachers know their students, so they develop curriculum and activities around students’ developmental and social needs. Of course, good teaching can occur with or without technology just as bad teaching can occur in both settings, and the use of technology doesn’t guarantee increased student learning and motivation. However, pairing the technology with
constructivist strategies greatly increases the likelihood of student motivation and success. Brucklacher and Gimbert ask,

Are educators who use computers and the Internet better educators? Are students who use computers and the Internet better learners? They can be. The cooperative learning that is possible in computer settings with certain role-playing software programs and with inquiry-based Web pages can help educators better guide students to construct meaning, to build knowledge, and to become better learners. (42)

WebQuests, when thoughtfully developed, do allow students to create their own understanding of content knowledge and to focus on the process of their own learning. Metacognition, or thinking about thinking, asks students to go one step beyond learning new information. They become responsible for consciously thinking about and guiding their own learning. During the WebQuest process students should use the following steps: develop a plan of action to complete the WebQuest, monitor how successful they are at completing the WebQuest task, and evaluate not only the final product but also the steps that led to the final product ("Metacognition").

In this chapter I have set forward the learning theory that undergirds the WebQuest activity. Elements of behaviorism, cognitivism, and constructivism contribute to the format of the WebQuest; consequently, the WebQuest, well-grounded in sound learning theory, is an effective technology-based activity. In the following chapters, I examine how specific WebQuests have been utilized in secondary English teacher education with a view to their function in secondary English language arts classrooms. The WebQuest is not a simple or single teaching
strategy, and through each of these chapters, I address different kinds of WebQuests and focus on their successes and limitations.
CHAPTER III

CREATING MY OWN WEBQUEST

Although the WebQuest concept has been in existence since 1995, I first learned of it in Fall of 2001. While taking a graduate course on teaching literature, I was asked to make a WebQuest. As a class, we talked about the basic steps: task, resources, process, and evaluation. We also looked at Bernie Dodge’s WebQuest site and at some examples. However, as I later realized, I didn’t really have a true grasp of the nuances of the WebQuest. Examining the WebQuest I created will illustrate both the possibilities for learning about WebQuests and problems that typically occur in WebQuest design.

Because I was studying American Literature at the time, I decided to concentrate on American voices for freedom. I chose Benjamin Franklin, Thomas Jefferson, and Martin Luther King, Jr. as people for students to research in order to create a booklet celebrating the American tradition of fighting for freedom. This WebQuest was created as an activity for American Literature students to complete during a unit on freedom. In the booklet, students would include early and contemporary voices captured through photographs, drawings, news headlines, and articles. I diligently researched Web sites that provided songs, autobiographical information, audio recordings of speeches, e-texts, paintings, and photographs. I wanted to utilize the multiple types of resources available on the Internet, and I
intended to produce a WebQuest that would be challenging and interesting. As you read this word processed version of the first WebQuest I created, Voices of Freedom Collection, look for a challenging task that requires higher level thinking, a clear process, scaffolding, and an appropriate method of evaluation.

Task

With at least one other student, create a booklet, Web page, CD-Rom, newspaper, video, etc. that celebrates a tradition of fighting for freedom. Your project may include the three role models you investigate in the process and resources step, but you must also include others that you find on your own. Look for leaders who have worked to earn rights and fight injustice. Make sure you choose at least 10 people to profile. Briefly identify and highlight the cause and achievements of the voices you have chosen. Include copies of photographs, drawings, news headlines and articles, and other images. If possible, include video or audio clips. Finally, compose a statement or artwork that demonstrates your groups’ beliefs about freedom.

Process and Resources

The following steps will help you identify individuals and cultural documents involved in American freedom struggles and introduce you to Web-based research. All of these steps will be completed with your partner(s).

1. Yankee Doodle
   a. Listen to and read the original version of “Yankee Doodle”, George M. Cohan’s “Yankee Doodle Dandy,” and the Confederate parody.
• Listen to the Cohan song and see the lyrics.
http://www.smickandsmodoo.com/aaa/lyrics/yankeedoodle.htm

• Listen to the song, see the lyrics, and see more on the origin.
http://www.niehs.nih.gov/kids/lyrics/yankee.htm

• Read the original and Confederate parody of the song.
http://ingeb.org/songs/yankeedo.html

b. How do the meanings differ? Why?

c. Prepare a version to one of the same tunes with your own lyrics to
perform for the class.

d. Other Web sites of interest

• Learn how to make a macaroni hat.
http://www.20ishparents.com/holiday/july4th/yankeedoodledan
dy.shtml

2. Benjamin Franklin

a. Read excerpt from Benjamin Franklin’s Autobiography on the 13
virtues.

• Start reading at “It was about this time I conceiv’d the bold
and arduous project of arriving at moral perfection.” This point
is about half way through chapter 8.

b. How does Benjamin Franklin’s plan connect with building a new
nation?
c. Why does Benjamin Franklin think it is important to analyze one’s behavior?

d. Why does Benjamin Franklin write about his struggles for moral perfection?

e. Make your own list of 13 virtues. Meet with your group and discuss how you might attain them. List 13 virtues that you can agree upon on a poster board to hang in the classroom.

f. Other Web sites of interest

   • Read information on Benjamin Franklin the printer.
     http://sln.fi.edu/franklin/printer/printer.html
   
   • Read Benjamin Franklin’s A-Z maxims.
     http://sln.fi.edu/franklin/printer/abc.html
   
   • View the “Join or Die cartoon.
     http://sln.fi.edu/franklin/printer/images/join-die.jpg
   
   • View a picture of Benjamin Franklin’s printing press.
     http://sln.fi.edu/franklin/printer/images/press.jpg
   
   • View pictures of Benjamin Franklin.
     http://www.english.udel.edu/lemay/franklin/
   
   • Create a postcard with an almanac on the front.
     http://www.classroomtoday.com/StudentCenter/postcards/createPostCard.asp?ID=96

3. Thomas Jefferson

   a. Read “The Declaration of Independence.”
• Read the text.


• See a photo of the original stone engraving.

http://www.nara.gov/exhali/charters/declaration/decstone.jpg

b. Find the original version that Thomas Jefferson wrote. How was it changed for the final draft? Why?

• View and read Thomas Jefferson’s original version.

http://www.loc.gov/exhibits/treasures/trt001.html

• Read an excellent analysis of the first draft.

http://www.loc.gov/loc/lcib/9907/jeffdec.html
c. What arguments does Thomas Jefferson use to support his opinions and persuade the reader/King?
d. How does religion play a part in the “Declaration of Independence?”
e. What is a tyrant? Who is the tyrant in this document?
f. Research at least one other “tyrant” from history or today. Who was/is fighting against this tyrant? Why? Do the liberation fighters have any similar documents to the “Declaration of Independence?” Create artwork that represents the oppressed person’s (fighter’s) struggle.
g. Other Web sites of interest

• View John Trumbull’s painting “The Declaration of Independence” 1786. You will have to scroll down to almost
the bottom of the page.

http://memory.loc.gov/ammem/today/jun06.html

• View another site with Trumbull’s painting and read an art critic’s opinion of it. http://americanrevolution.org/decsm.html

• View a photo of the 1781 flag with 13 stars and read about the history of American flags.

http://www.homeofheroes.com/hallofheroes/1st_floor/flag/1BenjaminFranklin/hist2.html

• View and read about Thomas Jefferson’s home Monticello.

http://www.monticello.org/


4. Martin Luther King, Jr.

a. Read and listen to Martin Luther King, Jr.’s “Letter from Birmingham Jail.”

• Read the full text.

http://www.stanford.edu/group/King/frequentdocs/birmingham.pdf

• Examine this extensive resource for everything having to do with Martin Luther King, Jr., including audio clips of the “Letter from Birmingham Jail” and the “I Have a Dream” speech. http://www.stanford.edu/group/King/index.htm

b. Read the article to which Martin Luther King, Jr. was replying.
• Read the article that prompted response.


c. How does religion play a part in the letter?

d. Write a “Letter to the Editor” response to Martin Luther King, Jr.’s letter.

e. Other Web sites of interest

• Examine information on the Martin Luther King, Jr. national historic site. http://www.nps.gov/malu/

• View Life images of Martin Luther King, Jr.

http://www.lifemag.com/Life/mlk/mlkpics.html

• View Life covers of Martin Luther King, Jr.

http://www.lifemag.com/Life/mlk/mlkcovers.html

• Examine Stanford University’s extensive Web site for Martin Luther King, Jr. http://www.stanford.edu/group/King/

Evaluation

Voices of Freedom Collection – You must turn in two parts.

I. A booklet, Web page, CD-Rom, newspaper, video, etc. that meets the following requirements:

a. celebrates a tradition of fighting for freedom

b. includes at least 10 people who have worked to earn rights and fight injustice
c. briefly identifies and highlights the cause and achievements of the 10 people
d. includes copies of photographs, drawings, news headlines and articles, and other images
e. includes video or audio clips

2. A document or artwork that demonstrates your groups' beliefs about freedom and how it applies to your lives.

When I completed this WebQuest, I felt that my task, process and resources sections, and evaluation clearly outlined what students were supposed to do and accomplish. In this WebQuest students know that they will be researching freedom fighters to gain a greater knowledge of the people and their causes to help them formulate and articulate their own beliefs about freedom. I tried to create a good WebQuest task to engage students by making learning relevant to their lives. In addition, within the process and resources section, I ask students to complete a variety of clearly written tasks that require synthesis, analysis, and evaluation of resources to gain skills and knowledge for their final product. They would be using their creativity and analytic skills, not simply restating someone else's material in a different way. They create a song. They analyze themselves and create their own version of Ben Franklin's 13 virtues. They research a current or historical "tyrant" and synthesize what they find out about him or her and the people he or she was oppressing into artwork. Finally, they write a formal letter of response to the famous Martin Luther King, Jr. "Letter from Birmingham Jail." All of these mini-assignments require that I authentically assess student learning. Students create
documents or artwork that shows how they have processed the provided information. In addition, students apply lessons learned about freedom to their own lives and learn lessons about freedom in order to complete the final task of formulating their own beliefs about freedom.

Although this WebQuest has a number of strengths, it differs from the original WebQuest design in several ways. First of all, I left out the introduction and conclusion steps. Though not necessarily a central part of the task itself, the introductory statement draws students into the project by highlighting the task ahead in a manner that asks them to recall prior knowledge and/or piques their interest. The conclusion ties up the activity by asking students to apply their new knowledge to future situations. Without these steps, the WebQuest seems more abrupt, less dependent on prior knowledge and less oriented to future learning. My WebQuest could be improved by adding an introduction that asks students to think about their personal freedom in relation to others who seek freedom. What freedoms do they have at home, in school, in their community, and in the United States? How do their lives relate to others who fight for freedom? The conclusion, then, could ask them to take the information they gained and apply it to their future. How can you work toward more freedom in your life or help others to do so?

The task I created poses several problems. My directions tell the student to pick one or more partners to complete the task. No specific assignments are made or roles created for dividing up the work to insure that it truly becomes a cooperative exercise. Furthermore, the final product asks students to profile ten people who have worked to earn rights and fight injustice, making them search for seven other people...
to include in their booklet. One of the points of a WebQuest is to provide quality resources for students so that they can spend more time on task rather than searching blindly for credible resources. Additionally, the task provides several options for the final product. While choice can be motivating, the vague directions of “create a booklet, Web page, CD-Rom, newspaper, video, etc.” do not provide students with sufficient scaffolding or structure to complete the task. They are forced to guess exactly what I want them to create. Compounding this problem, the evaluation method that I propose is not sufficiently thorough as it is nothing more than a checklist. A rubric would provide students with a better idea about what is exemplary, adequate, or failing work.

In my WebQuest, when examining the process and resources, students find that they actually have several sequenced tasks to complete, not just the two tasks described in the task section. In my WebQuest they must compose original lyrics, post their own lists of thirteen virtues, create original artwork representing a tyrant they must find and research on their own, and write a letter to the editor in response to Martin Luther King, Jr.'s letter. I intended that these assignments would obligate students to research historical figures. Then, they would take all that they had learned and put it into their multi-genre projects. However, when looking at this list, I realize that this WebQuest might take weeks to complete. Though WebQuests can differ in duration, the WebQuest I designed now strikes me as needlessly long and difficult. Furthermore, students have little idea as to how I will assess these smaller intermediate projects or even if or how these projects count in the final evaluation. The evaluation section should mention these assignments. Most importantly, these
projects should reflect the tradition of fighting for freedom that is the central learning goal. As their final task, I ask students to compose a document or artwork that demonstrates their groups’ beliefs about freedom. I am asking them to synthesize the information that they have gathered about freedom fighters and then evaluate what freedom means to them. This seems to be a more worthy, real-world task than creating a booklet repeating information they’ve found on the Internet.

Examining my classmates’ WebQuests in the course where I created this WebQuest, looking at other examples, learning different WebQuest development methods, and doing more research, clarified for me that my WebQuest needed significant improvement. My own struggle to develop a sound WebQuest made me even more intrigued with WebQuest design. I decided to learn more about them in a way that I’ve often found I learn best, by teaching. Having had the experience of trying to make a WebQuest would help me to better understand my students’ process of making them. First, I would make sure that students understand all of the steps of the WebQuest. Then, I would stress the importance of creating a doable, challenging task. Preservice teachers would also have to concentrate on carefully constructing steps and scaffolding for their WebQuests. Finally, they would learn about creating and using rubrics to evaluate their students’ work. I hoped that I could pass the lessons I had learned about WebQuest development on to my students.
CHAPTER IV

INTEGRATING TECHNOLOGY INTO THE METHODS CLASSROOM

After making the commitment to teach preservice teachers how to create WebQuests, I realized that attention would have to be paid to the technology and support available to me and my students. When integrating technology into the methods classroom, the following questions must be considered:

• How many computers do I have available to me during class time?
• Do the computers have the hardware and software available for what I want to use them for?
• What other technology resources are available in the room for me to use?
• Do I feel comfortable using these computers and the software?
• What type of training is available to me so I can use the computers and the software effectively?
• What kind of support is available to me in the classroom once my students start using the computers?
• What kind of support is available to my students outside of the classroom?

At Western Michigan University, I taught in a brand new wireless computing lab. The room had 24 wireless laptop computers loaded with word processing, Web-page design, image-editing, and Internet browser software preservice teachers would need to participate in our class electronic conference and create their own teaching
Web sites and WebQuests. The room also contained a data projector, two scanners, and two laser printers. The layout consisted of individual tables and chairs on wheels that could be organized in many configurations; therefore, collaboration could take place in many forms. Students could work by themselves, in groups of any number, or in a circle with their laptops as well as theater style for presentations. The flexibility of the layout of the room allowed preservice teachers the opportunity to utilize all of these discussion formats and work environments within the confines of a fully functioning computer lab.

In order to make their teaching Web sites and WebQuests, students needed access to Web page design software. The computers in our classroom, in the open labs in the basement of our building, and in most of the labs on campus included various versions of Dreamweaver® by Macromedia®. Western Michigan University's computer store also sells the most recent version of Dreamweaver® at a significant discount for students, or a free 30-day trial version of the software can be downloaded from the Macromedia® Web site. Other Web page design software they may have access to like Netscape® Composer and Microsoft® FrontPage® or a commercial sites on the Internet like Yahoo®GeoCities could also be used. Because I created my own Web site and WebQuests using Dreamweaver® and GeoCities, the majority of students chose these two to use.

Let me briefly describe the positive and negative aspects of working with a Web page design program like Dreamweaver® or a fully supported on-line publishing resource such as GeoCities that both I and my preservice teachers have discovered. In order to create their teaching Web sites and WebQuests, preservice
teachers need to know how to type, insert text and images, create multiple pages, make links to other Web pages, insert email addresses, and publish their pages. Both Dreamweaver® and GeoCities allow students to perform these basic functions though at varying degrees of difficulty. Dreamweaver® allows Web page designers a lot of flexibility to place text and images anywhere on the page and provides a lot of creative choices with regard to background colors and images and text color, font, and size. Students can import text from other files with little or no distortion of the original formatting. Inserting images from a file or from the Internet can be done easily. GeoCities allows Web page designers to do all of this, too. In fact, the simplicity of the site and the built-in tools on the screen make it easier than Dreamweaver® to locate buttons to insert text and images and format pages. However, because GeoCities is a commercially driven site meant for ease of use, I have two problems with it. First, the free site, when published, has pop-up advertisements appearing at any given time. The creator of the site has no control over the timing, amount, or content of the ads. In fact, some of the advertisements may not be appropriate for secondary students (especially Web cam ads that show women suggestively using the camera). For a small monthly fee, a site without advertisements is available. Second, the site doesn’t offer the flexibility of Dreamweaver®. My preservice teachers find that importing text from word processing files into the GeoCities site often causes a multitude of formatting problems that one doesn’t experience with Dreamweaver®. In addition, many of my preservice teachers choose template pages available on the GeoCities site rather than starting with a blank page. They sometimes have problems working with what the
template provides while also doing what they want or need to do for the course assignment. Nonetheless, some preservice teachers do not have the time to use the labs on campus, so many choose GeoCities so that they may work on their sites and publish them from any computer with Internet access.

One issue that students struggle with in regard to Dreamweaver® has to do with its publishing protocols. The steps that must be followed to define and publish the site can be complicated. Unlike GeoCities, which provides server space and instant publishing at the push of a button, Dreamweaver® is software, not a server, and thus does not provide a place for publishing pages. At our university, students are able to publish Web sites on the university server; therefore, preservice teachers utilize their Western Michigan University computer accounts to take advantage of their allotted space on WMU’s Web server. Known as “Homepages,” students must register for their space online and must know and use their student computer account user names and passwords to get started and to publish every time. Not only do the Dreamweaver® publishing steps sometimes confuse them, but problems with WMU’s server can also keep them from publishing. Publishing using Dreamweaver® often is more frustrating than the one button approach of GeoCities. After experience, though, completing these steps becomes second nature and Web pages and files can in the end be more easily worked with when using Dreamweaver® and a private server such as WMU’s.

Another aspect of our technology work included participating in a class threaded-discussion computer conference, Confer V, accessible from any computer via the Internet using students’ computer account user names and passwords. This
resource is provided by Western Michigan University for its faculty and students, but many other conferencing programs are available. Preservice teachers were asked to use this conference to write both in and out of class. I asked them to respond to specific topics related to English education, but I also encouraged them to add topics they were interested in. I wanted them to discuss what they were thinking about and had questions about, and I wanted to create an open forum for topics related to the teaching of English. The electronic conference was considered informal, and preservice teachers didn't have to worry about grammar, spelling, mechanics, etc. when posting their messages. However, I reminded them to make sure that their messages clearly conveyed their meaning as tone of voice and facial expressions do not accompany electronic writing. Confer was graded with regards to amount of participation and thoughtfulness of responses.

On Confer my preservice teachers had the freedom to express their thoughts about and problems with technology and the teaching of English both in and out of class. Confer provided a significant forum for discussion of WebQuests, and preservice teachers' comments on Confer are an important source of data from which I examine student attitudes. They came up with discussion topics like "I woke up with a WebQuest headache!" and "I hate computers!" Within these discussions, students offered both positive and negative thoughts about using technology in our classroom and advice for people who needed help with both technology related assignments and other course assignments. The author of the first Confer item above woke up in a panic at 5:30 in the morning, worried that she was part of a group that had to complete the hardest WebQuest ever. She writes, "And when I woke up I was
having an anxiety attack.” One of her fellow classmates commiserates, yet offers some hope:

The WebQuests have been time consuming but I think that we will all be really glad that we not only know what they are and how we can use them in a classroom but also how to create our own. They may be a little rough now but I think after we look at our critiques and at other groups WebQuests we will have a better outlook.

The author of the second Confer item above writes about her sheer frustration with and lack of knowledge about computers: “My whole life I have avoided computers whenever possible....I cannot surf the Web or send e-mail. All I know how to do is this confer and Word. I hate these stupid things....” Her classmates offered her the following advice:

•You’ll adapt, you’ll get better on computers, and life will go on, trust me.

•As frustrated as you might be you have to keep telling yourself that this will all be worth it, that is if you don’t throw your computer out the window first.

•The WebQuest...seems like a lot, but we will be working on it for the next few weeks I think and I wish I knew more about computers so in that sense I’m glad we are learning this stuff....

•This WebQuest assignment baffles me. I understand the content but the computer side of it still remains a mystery. Computers are only going to gain in popularity.... Just a thought, I wonder how many sixth graders right now could find a book in a new library using a card catalog as opposed to the number of students who could send an email? I think that we would not be too excited about the results of that little experiment.

•I think it’s cool that we learned how to build a Website. Plus I think WebQuests are cool...I don’t really know how practical they would be in my classroom (because I don’t know how many computers I would have access to for one class...plus internet). Even though we may hate computers...sometimes they are really great. Really they are.

All of these responses show that preservice teachers used Confer to think critically about how, when, and how much they might use technology in their classrooms.
As these comments show, once professors decide how they can use technology in their classrooms, they then must consider their audience. In any class that involves an extensive use of technology, professors must address the issues that make users hostile to and uncomfortable with technology so they can overcome their problems and fears. Palmquist et al found that even if teachers who are uncomfortable with new technology know that using technology will improve student learning, they won’t use it. 37% of my students indicated that technology problems alone caused them the most problems when designing their WebQuest. Therefore, time spent in preservice methods courses developing comfort with and addressing technology issues is likely a positive influence on whether those preservice teachers will actually use technology effectively in their own classrooms. A teacher survey conducted in 1999 by the National Center for Education Statistics (NCES) found that “23 percent of public school teachers reported feeling well prepared [to use computers and the Internet in the classroom] and an additional 10 percent reported feeling very well prepared to use computers and the Internet in their teaching” (United Teacher). These numbers are encouraging, but if they are to rise preservice teachers should be allowed to experiment with and learn from technology. Less experienced teachers and teachers who received more hours of professional development felt more comfortable using “computers and the Internet for classroom instruction” (United Teacher). Even those preservice teachers that resist using technology or feel less comfortable with it can benefit from the experiences. They are likely to be more open to future training once they become teachers.
Therefore, methods professors should be proactive in setting up technology support for their preservice teachers. Generally, preservice teachers have learned most effectively in my classes through the following experiences:

1. Seeing different teaching with technology techniques modeled
2. Learning programs hands-on in the classroom
3. Taking part in mini-lessons about the technology we're using
4. Having one-on-one contact with me, classmates, or technology support people in the campus computer labs.

First, methods professors should model the lessons that they expect preservice teachers to create. Preservice teachers need to see that using computers in the classroom can happen in many different ways, including the use of Web-based instruction and research. Web site and WebQuest creation, Confer, and general Web-based research goes on during each of my classes. Second, preservice teachers should be allowed to learn the programs that they will be using by experiencing them during class time. This in-class time allows professors to assess how the preservice teachers handle the new programs and their assignments to adapt the help and guidance they provide in class. Third, working in a lab environment on assignments allows professors the opportunity to design mini-lessons that directly address areas with which students are having problems. Mini-lessons about how to create links, add images, import résumés, find good on-line resources, respond to Confer items, etc. give preservice teachers the knowledge they will need to use these resources. Fourth, just having someone who can answer questions and provide support may help preservice teachers when using technology. Because my preservice teachers came
from a variety of educational backgrounds, some were undergraduates, graduates returning post-baccalaureate to get a teaching certificate, or practicing teachers returning to add an English endorsement to their certification, they brought with them a wide range of life experiences, not to mention computer skills. Some preservice teachers came to class with a lot of technology experience while others had practically none. The methods professor must work to help heterogeneous classes learn to help one another.

Technology support outside the classroom is also important. At Western Michigan University, English education students have several avenues of support. WMU has a Preparing Tomorrow's Teachers to use Technology, or PT3, grant that supports professors, instructors, and preservice teachers in using technology in their teaching. WMU is trying to engage preservice education students in learning through technology in order that they will be able to prepare their future K-12 students to meet the demands for a highly technology-dependent workforce. A technology proficient workforce that is now the prerequisite for the region's, the state's and the nation's economic growth and community well being. It is the ambitious goal of this program to ensure and document that the 800 graduating Western Michigan University preservice teachers each year meet or exceed, and practice rigorous standards of collaborative learning practices for integrating technology in the classroom. (Preparing)

University staff has received training to incorporate technology into their methods classes in order to demonstrate the use and effectiveness of technology in the classroom. These efforts have created a group of colleagues who can support one another and do research into their efforts to integrate technology. In addition to the PT3 grant, the College of Education also has a computer help lab where students can receive one-on-one assistance on computer related activities. One student comments,
I have been to the lab twice in the last week, and they have been so helpful. I worked with two different people in the two days I went, and both were equally kind and knowledgeable tutors when it came to Dreamweaver. They got me going so that I could work on my page at home over the weekend, and I feel very comfortable going back when I need help with scanning pictures. This lab is a great tool!

My students benefited greatly from this outside avenue of support since one-on-one help with Dreamweaver® is available. However, when such a lab does not exist, professors can try to set up their own hours in an available computer lab. Professors, other students, or former students could be available to help those who need it.

Finally, methods professors can urge preservice teachers to take advantage of future professional development opportunities and to be open to learning from their future students in order to continue their technology education. As Palmquist et al realize “technology continues to change, obviously, and will change in directions we cannot now predict. Teachers, then, need to know how to learn as new applications appear” (212). Preservice teachers need to realize that they can seek help and further education within their schools and look for help outside via professional conferences, professional organizations and/or Web resources. One of my Secondary English Education methods students wrote, “I think that I would feel comfortable using computers in my future classroom as long as I had a computer teacher/mentor helping me because there is still a lot that I don’t know.” Knowing that there will be someone to help with technology activities may encourage teachers to create them. Preservice teachers should also be encouraged to take advantage of professional development opportunities and to pursue ongoing training once they get jobs (Ray 85). Another avenue of education may also come from their future students. Selfe describes, “...given the fact that most educators are still raised primarily in a print-based culture,
we have to prepare teachers to learn, not only from their own first-hand experiences with media, but also from observing their students' experiences systematically" ("Preparing" 28). Preservice teachers should realize that often they could learn about technology from their future students who may know more than they do. The secondary English education methods classroom should prepare and empower preservice teachers to continue learning about and utilizing technology.
CHAPTER V

TEACHING THE WEBQUEST TO FUTURE TEACHERS

As a doctoral student, I have been assigned English education methods courses to teach. At Western Michigan University, secondary English education majors take Writing in the Secondary School (English 479) and Teaching Literature in the Secondary School (English 480). Secondary English Education minors take one or the other. Both are capstone courses taken after completing most literature course requirements and completing at least some if not all of a semester-long pre-internship and at least three education courses. Therefore, the methods courses serve to bring together content area knowledge with the knowledge gained in the education classes. The writing methods course “focuses on the continued development of student writers in grades 7-12, and on ways one can encourage and respond to student writing, assess writing growth, and use writing as a means of learning. [It f]osters a theoretical understanding of the writing process, in part by writing in varied genres and forms. [It e]mphasizes writing as an integral component of the entire curriculum” (“Undergraduate”). The literature methods course is “a study of techniques and theories of teaching literature to young adults” (“Undergraduate”).

These courses seek to meet many of the standards national and international organizations such as the National Council for Accreditation of Teacher Education (NCATE), National Council of Teachers of English (NCTE), and the International
Society for Technology in Education (ISTE) have enacted, standards relevant to goals for preparing future English language arts teachers. These standards have been created to help colleges and universities create programs and curriculum for teacher preparation by providing guidance for important elements of teacher preparation such as content, pedagogy, and methods courses and intern teaching. Because the methods course functions as a part of the overall program, it should provide future teachers with opportunities to combine their content knowledge with their pedagogy instruction. Creating a WebQuest not only allows preservice teachers to demonstrate their content and pedagogical knowledge but also allows them to learn about, experience, and create a Web-based lesson. Pedagogical, content, and technology standards can all be met when asking preservice teachers to create WebQuests. Please see Appendix A for a complete description of the specific standards that the WebQuest fulfills.

During my research on WebQuests, I taught two sections of the literature methods course and one section of the writing methods course in three different semesters of 2002. When deciding how I would integrate the WebQuest into the curriculum for these classes, I followed three steps. First, I decided what core content material I wanted to present. What teaching strategies would preservice teachers need to teach literature and writing? Then I developed a semester plan that would allow students to integrate their content knowledge and the teaching strategies they had learned in their education courses and my course. Second, I used the WebQuest assignment as one way for students to practice assimilating content knowledge and teaching strategies into a learning activity. Finally, I assessed their success at
creating effective WebQuests, and I evaluated how well the integration of technology worked in our classroom.

Step 1 – Establishing the Curriculum

When preparing to integrate technology into my English Education methods courses, I first determined my learning objectives for the course and then decided how technology could fit into my curriculum. Therefore, “[t]he computer supports instruction but does not dominate or dictate it” (Palmquist et al. 211). Because I first established the concepts important to teaching English language arts in the secondary classroom, I knew that I would not be using technology just to use it. Only through extensive planning, practice, and experience did I finally feel that I could integrate content knowledge and technology with success. The following pages will describe that process.

Literature Methods Course - Winter 2002

Before teaching this class, I identified several topics that I felt were important for preservice teachers to learn about based on what I found important during my five years teaching high school, my graduate coursework, and my reading of the professional literature. I chose Leila Christenbury’s Making the Journey, Frank Smith’s Reading without Nonsense, and Sandra Wilde’s Miscue Analysis Made Easy as required reading. Preservice teachers would also be picking from a list that I had provided three other professional books to read that addressed the main topics of our class. In Christenbury’s book we focused on specific techniques for teaching
literature, strategies for leading discussions, and classroom management for English language arts classes. Because I had been trained to use cooperative learning, I presented information and strategies for successful cooperative groups. In addition, preservice teachers used their knowledge about discussion formats to analyze a videotaped literature discussion, looking for strengths and weaknesses. Another important goal that I had for this class was to learn about teaching reading as well as about teaching literature. Therefore, preservice teachers read the Smith and Wilde books to better understand the reading processes of their students and learn how to support students who would need reading help in their classrooms. After listening to a middle school student read a selected passage on audio tape, my preservice teachers analyzed the miscues, any derivation from the printed text, the reader had made and suggested strategies to help that reader improve his reading strategies. Though many of my preservice teachers initially thought that reading wasn't the responsibility of secondary teachers, after this assignment they realized that knowledge of reading pedagogy would certainly impact the way they taught literature. Finally, my preservice teachers created an individualized reading program to encourage independent reading by their students. The WebQuest would be another way in which preservice teachers could combine their knowledge about literature and sound teaching practices.

Literature Methods Course - Summer 2002

For this semester, research into constructivist learning greatly impacted the goals for my classroom. After learning about constructivism, I realized that I had
started to implement its tenets in the previous semester, but in a disconnected way. Thus in the following summer session, I began the class with a brief review of behaviorism, cognitivism, and constructivism. I let preservice teachers know that because I believed in constructivism and wanted to model it, we would be running our classroom in a constructivist fashion. Preservice teachers would be responsible for their own learning in an active way, and I would work as a coach to help them find the resources to learn. Though we tackled many of the same topics as the previous semester including literature discussion formats, reading strategies, and cooperative learning, we approached the learning in a different way. Now preservice teachers were working in groups researching professional materials and areas that interested them within our topics of study. Rather than having them purchase books, I developed a course pack with readings from Brooks, Nolan, and Gallagher’s Web-Teaching: A Guide to Designing Interactive Teaching for the World Wide Web, articles from the NCTE published Weaving a Virtual Web, Beach and Marshall’s Teaching Literature in the Secondary School, and Christenbury’s Making the Journey. They also chose two additional professional books based on the topics we were studying in class and the extra information they needed to know to create their unit plans. I added, however, a more focused discussion of Michigan’s English language arts standards and lesson planning because I had found in the winter session that my preservice teachers needed extra help and guidance in this area. The summer term students wrote a unit plan to apply their content knowledge to the English educational theories we had learned in class and through the outside reading that they had chosen to do. In this course, the WebQuest would be a final project and
culmination of their group work though not necessarily related to their unit plans. Because we had specifically discussed constructivism and participated in a course modeled on it, I would be able to more clearly convey how the WebQuest allows teachers to be coaches, students to be constructors of knowledge, and classes to be collaborative work spaces.

Writing Methods Course - Fall 2002

The goal of having a student-centered constructivist classroom continued in this class. Because this class focused on the teaching of writing, the two texts that I chose modeled the ideas of constructivism. Tom Romano's *Clearing the Way* and Linda Christensen's *Reading, Writing, and Rising Up* advocate student voice and choice. In both of these texts, the authors encourage readers to allow their students to own their writing rather than telling students what and when to write. Both propose building a supportive classroom community and encourage a workshop-style of classroom. Preservice teachers were also asked to pick another professional book to read that allowed them to explore their own interests. We looked first at standards as discussed in *Best Practice* and those outlined by the State of Michigan in order to more fully understand Michigan's standardized writing test. It was my hope that when they teach writing, preservice teachers would be using the "best practice" principles which call for classrooms and/or learning to be "student-centered, experiential, holistic, authentic, expressive, reflective, social, collaborative, democratic, cognitive, developmental, constructivist, and challenging" (Zemelman et al 8). Once we understood the standards, we drew upon Romano and Christensen to
explore how to best support secondary students in meeting these standards. My preservice teachers focused on developing activities that would allow their students to enhance their writing skills and voices. I asked preservice teachers to focus on finding ways to allow students to mature as writers and, simultaneously, meet the standards we had studied. In groups, they created unit plans knowing that their culminating project of the unit plan would be a WebQuest activity meeting "best practice" standards for the teaching of writing.

Step 2 – Implementing the WebQuest into the Curriculum

After I devised what preservice teachers should know about teaching English language arts, I had to create lessons to help them learn and utilize that information. I tried to create a balance between technology and non-technology related activities. March argues:

If you're like most educators, you get excited about new ideas for helping students learn and grow, but then feel your chest tighten or your spirits sink when you remember your already bursting curriculum requirements and the logistical demands of classroom teaching. With everything else that must be taught, how can we add these new and important strategies? WebQuests were designed to address this dilemma by bringing together the most effective instructional practices into one integrated student activity.

Technology activities would be one way in which preservice teachers demonstrated that they had met curriculum requirements.

For all three classes, I asked preservice teachers to create individual teaching Web sites to showcase their lesson plans and activities for students, philosophies of teaching, and links for parents, students, and other teachers. Creating these sites at the very beginning of the semester served an important purpose. Preservice teachers
learned how to publish on the Internet before designing the WebQuest. Therefore when creating the WebQuest, they focused their efforts on creating a lesson plan grounded in content knowledge and based on educational theories rather than struggling with the technical aspects of Web page design and publication. The teaching Web site, modeled after an assignment created by Dr. Allen Webb, required that preservice teachers design six main pages: a home page, a teaching philosophy page, a student page, a teaching page, a parent page, and a professional page. Because I wanted students to immediately begin learning how to manipulate text and images on their Web sites, the homepage was due first and contained text, links to other pages, a photo of the preservice teacher, and images. The teaching philosophy, teaching, and professional pages allowed preservice teachers to articulate their theories about teaching English language arts for other teachers, parents and prospective employers. The student and parent pages would eventually allow applicable interested parties to see what is happening in the teacher’s classroom. See Appendix B for a more detailed assignment sheet of the teaching Web site.

At first, students had mixed reactions to creating their Web sites, but by the end of the semester, the majority of students showed great pride in their creations. They used Confer, our electronic computer conference, to voice some of their complaints about the time and effort that designing the pages took and about the problems they were having. One preservice teacher admitted, “I’m scared too! I’m more than computer illiterate, I don’t have one at home. Of course I use the school computers, but I live an hour one way from school, so I have to try to fit this in between classes two days a week.” For this particular student who didn’t even own a
computer, finding the time to get to a computer on campus and overcoming her lack of confidence about using technology was difficult. However, preservice teachers soon became wonderfully supportive of one another, sharing their common miseries and helpful hints. Three students offer their encouragement and share helpful hints:

• I feel your pain. I'm not the most creative either! But...I have found it really helpful to check out as many examples of other "teacher Websites" as possible. I've noticed that different backgrounds can really spruce things up.

• Okay. I think we're all a little afraid because technology is so prevalent in our society and all this has happened in the last decade. When I was doing my pre-internship my mentor teacher asked me to edit her Web page. Luckily we never got around to that.

• Everyone's Websites are looking really good so far. I am impressed that everything is turning out as well as they are. I had my doubts in the beginning of the year about doing the Web pages, but I am feeling much better about working on them now.

In the end, the majority of students in each of the three classes enjoyed making their Web sites. Figure 2 represents the percentage of students from each class who cited the Web site as one the top four "strategies/ideas/lessons" that they learned from our class.

What I found surprising about these numbers was that it was my clear impression, based on confer and in-class comments, that the Fall 2002 writing methods course students were less negative from the very beginning about creating Web sites because the majority of them felt comfortable using computers from the beginning of class. Perhaps the web site didn't make as much of an impact with then because they weren't stressed about using technology from the start.
Because the WebQuest assignment came at the end of the semester, preservice teachers were able to combine their knowledge of teaching literature or writing with their technology skills. Since 3 two-hour class periods had been spent just on Web page design instruction at the beginning of the semester for Web site development, introducing the WebQuest design was accomplished in one class period. From the very onset of the technology and WebQuest learning, students were learning about, learning by, and applying the constructivist idea that students learn better by doing rather than receiving. I provided access to information about WebQuests, but I expected students to make sense of them through independent research of and direct experience with completing a WebQuest. They produced WebQuests showing that they had learned not only the technology but also English language arts pedagogy.
Elements that were Consistent across All Three Classes

Once students were familiar with the technology needed to create a WebQuest and had the English language arts content information and teaching strategies to develop a meaningful activity, they were asked to do specific reading about WebQuests. I chose material written by Bernie Dodge, the creator of the WebQuest site, training materials from the official WebQuest site, http://Webquest.sdsu.edu/, and articles taken from on-line educational resources like Education World, http://www.educationworld.com. I provided handouts for the majority of the reading, and students were also asked to access information via the Internet with links that I provided. This reading introduced the main steps of the WebQuest: introduction, task, process, resources, evaluation, and conclusion. Some preservice teachers accurately identified that the steps of this process resembled the lesson planning we had been doing earlier in class. Following the WebQuest format, preservice teachers wanted to gain students’ attention, give them direction, make sure they understood what they were doing, allow them to work on their own, and apply the learning to their lives. After students learned what a WebQuest was, we reviewed different WebQuests using our data projector, pointing out strengths and weaknesses of those WebQuests we viewed. Because each student had their own lap top computer, they were able to view both the elements I was discussing and elements they wanted to discuss because they had the example WebQuests on a screen right in front of them, too.
Another major step in orienting preservice teachers to WebQuests involved completing a training WebQuest exercise, “A WebQuest about WebQuests,” provided on the WebQuest site. Preservice teachers directly experienced the steps of the WebQuest by completing this training WebQuest that asked them to evaluate different WebQuests. See Appendix C for a print version of the activity. First, groups of four were formed, and each person was assigned a role to carry out. The roles of efficiency expert, affiliator, altitudinist, and technophile required that preservice teachers assume different personas to evaluate five example WebQuests on their own. After each person had evaluated the five WebQuests, I asked people with the same roles to group themselves together to discuss their evaluations. Then, the original groups of four met to jigsaw their different personas’ opinions about the five example WebQuests. Students were able to work independently, in jig-sawed same-role groups of five or more, and in their original groups. Finally, preservice teachers evaluated any three WebQuests that they had chosen from the “Matrix of Examples” on the WebQuest site. After we completed all of this prep work, each class was required to form groups in order to make their WebQuests.

Elements that Varied across All Three Classes

As I gained experience with teaching preservice teachers to design WebQuests, I put increasing emphasis on evaluating each others’ WebQuests. Although preservice teachers in the three courses had essentially the same amount of time to create the WebQuest, I added more time for peer-evaluation of the WebQuest each semester. In my first methods course, preservice teachers took half an hour
during class to look at and evaluate another group’s WebQuest with the rubric I slightly modified from “A Rubric for Evaluating WebQuests” on the WebQuest site (see Appendix D). They met with the other group and discussed their findings also for about half an hour. This class took about one hour, in total, to evaluate a WebQuest and then talk to the other group about their evaluation of the WebQuest.

In my second methods course, preservice teachers had one week to evaluate another group’s WebQuest with the rubric and then met with that group for at least one hour to discuss what they had found. Corresponding via email with other faculty who teach the WebQuest that summer, I learned that having preservice teachers complete classmates’ WebQuests led to a better and more thorough evaluation. I decided to have my third methods course preservice teachers actually complete another groups’ WebQuest. Thus, they would not only improve their understanding of how to use the rubric to evaluate the WebQuest, but they would also be able to assess just how feasible the WebQuest would be for secondary students. After completing their individual roles as specified in the other groups’ WebQuest, preservice teachers evaluated how feasible their task had been. See Appendix G for their evaluation form. Then, they evaluated the WebQuest using the rubric and met with the group that had created the WebQuest to review specific elements that needed to be improved.

Because I had benefited from emailing other teachers and professors who were using and teaching about WebQuests, I decided that in my second methods course, Summer 2002, preservice teachers could also benefit from communicating with teachers who actually used WebQuests in their classrooms. It was one thing for
me to say that they were being used, but another, more powerful learning event, for
preservice teachers to be able to email practicing teachers who used WebQuests with
their secondary students. In their email letters, preservice teachers asked these
practicing teachers about the use of WebQuests in their classes and the time taken to
create them. Preservice teachers even invited the practicing teachers to look at the
WebQuests they were creating in class. One student commented on our computer
conference,

Though I still think that the way that WebQuests just consume large quantities
of class time, coupled with the potential lack of computer accessibility may
become a problem with this kind of project…I don’t fear it as much as I
originally did. After having created my own, and corresponded with another
teacher who has actually used them in her classroom—I’m starting to develop
my own ideas about incorporating a refined form of a WebQuest into my own
classroom. Because of my former fear of computers, I would never have
considered building a lesson around something that was/is so reliant upon
technology. Now, I think that it might work.

Corresponding with a practicing teacher who actually used WebQuests was an
essential part of helping this student see the relevance of technology-infused
activities.

Step 3 – Evaluation

To evaluate the success of incorporating WebQuests into the methods
curriculum, I first had to evaluate the WebQuests preservice teachers produced. I
used the rubric provided on the WebQuest site that they had used to peer-evaluate
each other’s WebQuests so that they knew right from the start the criteria I would be
using to evaluate their work. See Appendix D to read the print version of this slightly
modified rubric from the WebQuest site. Preservice teachers had the opportunity to
change their WebQuests after receiving feedback from peer-evaluations. In the following two sections, I discuss how I evaluated these WebQuests. In order to fully understand my evaluations, please read Appendices E and F for print versions of the two WebQuests I evaluate, or read them online at the Web sites provided below. I took out all graphics from these print versions due to copyright issues. The evaluation of the first WebQuest below (Appendix E), “Time Travel to Ancient Greece,”
(http://homepages.wmich.edu/~c1kosiba/Webquest/Webquestgreekmythology.htm) is the final product of a student group after the WebQuest had been peer evaluated using the rubric and peer evaluators had met with the group to go over their thoughts. My second evaluation is of the “The Pearl” WebQuest (Appendix F)
(http://homepages.wmich.edu/~c0cherl/Webquest.htm). It is the final product after another group performed the actual roles of the WebQuest, filled out an evaluation of their job completing the role (see Appendix G for this evaluation form), and used the rubric to evaluate it. Though I found that the creators of the second WebQuest did not seem to heed the evaluations of their peers, especially in relation to their critiques of the roles they had to complete, I found that adding this element to the process helped me evaluate the final WebQuest in a more thoughtful manner. After adding the activity of students actually completing their peers’ WebQuests to my third class in this study, I realized that completing and critiquing their classmates’ WebQuests is just as important as creating the WebQuest. In evaluating this WebQuest after doing it, peer evaluators discovered more problems than I would have in my one-time evaluation.
"Time Travel to Ancient Greece"

Overall Aesthetics

This WebQuest was intended as an introductory unit on Greek mythology. It introduces its topic and a map of Greece on a welcome page. From this page, students can access all steps of the WebQuest via a navigation bar. This navigation bar can be found at the bottom of each of the main steps of the WebQuest. Each page has as its header a picture of some form of ancient Greek Art. The font chosen even seems to look ancient. The size of the font is large enough that students can read it easily. At the time I evaluated it, all of the links worked, and there were very few grammatical errors. Judged by overall aesthetics, the WebQuest meets all of the requirements.

Introduction

The beginning question, “What would it have been like to wear togas, watch the original Olympic Games, or to eat grapes on the stone steps of the Parthenon?” sets the tone for a well-written introduction. It draws on prior knowledge by mentioning togas, the Olympics, and even the Parthenon. The tone is upbeat and interesting, drawing students’ attention by telling them they will work as a company trying to win an account to do a travel guide.
Task

Students learn from this task that “Odyssey Time Travel, Inc. needs a “design team to produce an informative and eye-catching travel guide.” After the guide has been completed, the travel agency will hear presentations to make a final decision about which design team will be hired to produce the guide.

Some WebQuests that I’ve seen on the WebQuest site include specific reference to standards and the rubric found on the WebQuest site evaluates this aspect. Though we had talked about standards in class, preservice teachers did not have to articulate the standards met in their WebQuests. The task tells students that they must know about the culture, daily life, geography, history, art and architecture of Ancient Greece after researching the provided Internet resources. Michigan’s Standard 11 addressing inquiry and research states that “all students will define and investigate important issues and problems using a variety of resources, including technology, to explore and create texts” (“English”). This WebQuest’s task, however, doesn’t ask students to go beyond rote repetition of knowledge gained elsewhere. They are taking multiple sources of information to create the travel guide, but I suspect that students could cut and paste the information from the resources sites. What is missing is the higher level thinking component. Students aren’t asked to take a position or go beyond the literal data. In addition, Michigan’s standard 11 as described above stresses identifying an “important issue,” and this research clearly could be a part of the higher-order thinking. While background information about
Ancient Greece may be needed, how can students deal with this information beyond just finding it and writing about it?

**Process**

This section begins with asking students to take roles, which is an important part of why the WebQuest fits the constructivist model since students are responsible for researching independently and then coming together to report their research and divide up the work of making the travel guide. Taking roles of historian, geographer, cultural anthropologist, and art historian, students are asked to look at a wide span of history, 2300 B.C. to 399 B.C., to pick out major highlights to include in their reports back to the group. Their formal requirement is that each role identifies at least four pieces of information from their section. A good strategy, students are reminded to follow a link at this point that leads them to the rubrics that will be used to grade their work.

The clarity of the process falls slightly short of what could lead students to do their best work. Each step is stated fairly clearly and is set apart with bullet points. In most cases, however, I think that labeling each step of the process as “Step 1”, “Step 2”, etc. makes the process even clearer for students, and this clarity is an important part of a successful WebQuest. Students should be able to complete it on their own with little need for asking the teacher technical questions such as what they should do next. The other problem with the steps is that there are not enough guidelines to really know what the teacher wants, especially exactly what to write and how to do the presentation.
Better scaffolding would solve these clarity problems. Some students may not know what a travel guide is or how to write articles for one. What should an advertisement look like in a travel guide? How do students structure a presentation to get someone to pick their travel guide? The activities are clearly related to one another but do not ask for higher level thinking. By answering these questions, this WebQuest could be revised to have students go beyond looking up information and then simply reporting it. Finally, other than leading them to rubrics and a peer edit checklist, which only ask them to look at mechanical aspects, not content, there are no checks for understanding to make sure they are completing a good product.

Resources

The resources section for the WebQuest is for all members of the group and provides seven Web sites from which to choose. The historian and geographer could easily find information from the timeline, ancient history sources, and history for kids. The cultural anthropologist could find the information needed for that section in the previous resources or also from the two mythology resources. Finally, the art historian could find pictures at the pictures of Greece site, though I’m not sure how they could be a knowledgeable “historian” just by looking at the pictures. Also included in the resources section is a link to help with Microsoft® Publisher® which will help groups put together their travel guide. These resources seem adequate for what students need to accomplish, though they don’t include any audio or video information that can be interesting for students to access.
The resources section could be improved in several ways. First, it could be annotated. By providing a little introduction to or explanation of Web sources, preservice teachers provide their students with a preview of the sites they will be viewing. Second, many WebQuests divide the resources up in the process section specifically based on the roles students take. Those Web sites that apply to the role would be found in that role's description. By coordinating the role with the resources, students are more likely to understand their roles. Third, when choosing resources, and, ultimately, whether or not this project should be a WebQuest rather than a non-Web assignment, preservice teachers should look for Web sites that present information needed to complete the WebQuest in a rich and effective way. Before even beginning to design a WebQuest, teachers should ask themselves, "Could this assignment be done just by using resources from the library?" If so, there is no reason to create a WebQuest. Although library resources can be part of a WebQuest's resources, print sources wouldn't make up all of them. The "timeliness and colorfulness" of the Internet makes using a Web-based activity like the WebQuest lesson worthwhile. The resources for this WebQuest don't stand out as being more than what most libraries might have about ancient Greece. The WebQuest designer needs to do an adequate examination of Web site resources in order to take advantage of the unique information available on the Internet.

Evaluation

In this section, preservice teachers provide two rubrics: one that students will use to evaluate themselves and one that the teacher will use to evaluate students.
Both have the same requirements. Students are assessed on whether they have participated cooperatively, completed the travel guide, included the four pieces of information, and participated in the presentation. They are also evaluated on overall visual appeal and number of mechanical and grammatical problems. Though this WebQuest includes two rubrics, students could not determine their success at creating the travel guide or presenting it to the “committee” that will choose the winning travel guide. The descriptions for the different levels basically break down to the question of whether the students did the assignment or not, not how well the students did it. For example, the category “Completion of the Travel Guide” gives students the highest score possible, four, if the “Student was able to find all the information needed to complete role work.” In addition, under “Research Information” students receive the four full points if “Student research provides four or more pieces of interesting information as the role required.” The “Overall Visual Appeal” section is better with students receiving a four if “Appropriate and thematic graphic elements are used to make visual connections that contribute to the understanding of the travel guide content. Differences in type size, font, and/or color are use well and consistently.” In sum, the rubric seems more like a checklist than a qualitative analysis.

“The Pearl” WebQuest

**Overall Aesthetics**

When preservice teachers create their WebQuests for class, I stress that the graphic elements are not as important as the content. I warn them to spend more time
creating a worthwhile and challenging task. This WebQuest definitely lacks graphic elements, as the only graphic for the entire WebQuest, a picture of six pearls, occurs on the introduction page. While I would rather see no graphic elements than superfluous graphics that are added just to make it showy, the complete absence of graphics on all but the introduction page does not take advantage of the technology available. Pictures and graphics can add to a lesson, making it more motivating or interesting, perhaps even easier to understand. The navigation and flow is seamless as all pages are linked together from the side menu, allowing easy access to any page. In addition, links to scaffolding sheets are easy to access, though links back to the main page on those scaffolding sheets could be more helpful than having to use the back button from the browser. At the time of my examining the WebQuest, there were no broken links and no grammatical errors that took away from the activity.

Introduction

After reading the introduction, I thought that the symbol and themes introduced in the first section would be a large part of the task of acting out a scene from the novel. Bringing up “love, luck, and prosperity” could catch the interest of teens. The idea of the pearl bringing evil to the main characters’ lives could be a “compelling problem” that students could address. Therefore, I felt that this introduction foreshadowed that the scenes they would be turning into plays would focus on these ideas. (After evaluating the rest of the WebQuest, though, I find that the scenes do have compelling ideas and themes, but students are not asked to concentrate on or stress them. Thus, the introduction really doesn’t accurately
foreshadow what the lesson is about.) Overall, the introduction lacks a hook for students’ interests though it does draw on their prior knowledge since they have already read the novel.

**Task**

This section begins with the statement that the work of creating the scenes to be acted out will be fun. Students are given seven steps to follow. For this particular section of the WebQuest, the numbered steps would not be needed, so I only discuss the first paragraph. (The numbered steps should be in the process section.) At this point, the task definitely seems doable, and secondary students should be engaged by the idea of performing a play. However, the level of thinking isn’t discernible at this point since the task is not described sufficiently. Will students just be analyzing information or will they be synthesizing information in order to create the script?

As stated in the previous WebQuest evaluation, preservice teachers were not required to explicitly state how their Web-based lesson meets any standards. This WebQuest, written for a methods class about how to teach writing, does meet Michigan’s Standard 6 that addresses voice: “All students will learn to communicate information accurately and effectively and demonstrate their expressive abilities by creating oral, written, and visual texts that enlighten and engage an audience” (“English”). Once the role responsibilities are explained, we learn that the creative processes of writing a script and designing costumes, sets, and lighting require advanced communication skills. In addition, the research that students must do to accomplish this meets Michigan’s Standard 1 which addresses meaning and
communication in reference to reading: “All students will read and comprehend general and technical material” (“English”). The material that must be accessed on the Internet requires that students read about the technical aspects of producing a play, and they show whether they comprehended the material or not by the success of the play.

**Process**

Overall, the process section comes close to meeting the highest standards. Those specific changes and additions noted below, if made, would make a good process section excellent. After moving the numbered steps from the task section to this section, secondary students would definitely be able to follow through the entire process with the exception of some of the individual role requirements.

The producer’s role of writing the script requires that students research how a script is written and convert the chosen scene into a script. One element of the directions, however, was unclear to me and the peer reviewer completing the role: What is blocking? As with all of the roles, a role sheet link is provided that gives students a place to take notes on the Web resources visited. This sheet provides a good check that students are finding and organizing the information they need.

The costume designer’s role provides additional helpful scaffolding. The costume sheet link provides places for each character’s costume needs and states who will provide those needs. There is a character description link that also helps students organize the descriptions they must write. (Based on knowing the workload for each role, I suggest that this part of the role would be better done by the producer who
writes the script and, therefore, develops the character. Once the character’s traits have been established, the producer could share the information with the costume designer who would then tailor the costumes to the role. At the very least, directions to work on and share this information with the producer would be important. 

Finally, there is a numbered list of jobs the costume designer can look at as a reminder of what needs to be done.

More scaffolding like the organizational sheets provided for the costume designer would be helpful for the set designer. After researching the Web resources, the set designer must prepare a proposal for his/her group. A proposal sheet provided for this role would make the student’s job easier and more uniform though the directions state that the proposal must include “items needed, materials with instructions, and reasoning behind your ideas.” Part of this role also asks that the set designer consult with the producer about how their ideas will work with the rest of the dimensions of the play. This requirement should also be a part of the costume designer’s role.

The final role, lighting technician, needs the most reworking. As I understand the directions, the lighting technician only needs to do research about lighting and write a two page paper about why lighting is important while also including a little bit of history about lighting. Does the lighting technician do the lighting for the play? If not, I agree with the peer reviewer who thought that this role was a bit “light” in its workload. The paper would also just be a demonstration of comprehension of the information from the Web resources. If the person is doing the lighting, much more direction and scaffolding would be needed to do such a technical job. This also
reinforces the point that all the resources don’t have to be found on the Internet. On-site help would be needed for lighting. Anything that can help students complete their roles should be stated in their role definitions.

**Resources**

Although this WebQuest’s resources are found within the process section, this group chose to also include the resources again on their own resource page. This step wouldn’t be needed, and one of the peer reviewers felt that having them again on a separate page was confusing for him. Another critique offered by the peer reviewers was that the resources within each role were often from the same main page, making getting varied information difficult. For example, the four resources provided for the producer come from the same main page: www.vcu.edu/artWeb/playwriting. The four sources for the costume designer come from two main pages, and three of the four for the lighting technician come from the same main page. Only the set designer can find four varied sources from which to choose. Though these sources would provide the information needed, different perspectives and information may be more helpful to students. A final critique by the peer reviewers was that links to The Pearl Web sites and historical and cultural information surrounding The Pearl would have been helpful in writing the script, designing the costumes, and doing the sets.

**Evaluation**

The rubric provided for evaluation provides good explanations for the four quantitative levels. After reading the rubric, students know that their play needs to be
creative and interesting and be well-organized. There has to be an appropriate amount of dialogue, and written work must be turned in looking professional. These requirements represent four of the six categories of the rubric. The problem with this is that the majority of this work falls to the producer of the group. Therefore, there is no direct evaluation of the costumes, sets, or potentially the lighting. The two remaining categories “requirements” and “working with others” check to make sure that all steps were followed by all group members and that all group members worked together on the project. The “requirements” section could include a check list for students to make sure they know exactly what they should have accomplished for this part of the rubric. As a final evaluation, students must also evaluate themselves and how they worked as a group. Because cooperative work is so integral to the WebQuest, keeping students honest and accountable for their work is important.

Each of the three semesters that I have asked preservice teachers to create WebQuests I have looked more and more carefully at how the WebQuests they produced should be evaluated. Though studying why WebQuests are effective from a theoretical perspective and creating them allow preservice teachers to experience most of the elements of using WebQuests, not being able to adapt their final products based on secondary student experience removes an important part of the process. Practicing teachers observe and adapt lessons based on the strengths of their individual students and the outcome of those lessons. By adding the component of having preservice teachers complete their peers’ WebQuests as if they were students, not just evaluators, preservice teachers have a better, if not complete, idea of how their WebQuest will work in a secondary classroom.
Technology Survey

One final way I evaluated the success of the WebQuest is by having students fill out a technology survey on the last day of class to ascertain the effects of our curriculum. A copy of this can be found in Appendix H. Combining the totals from my three classes, I was able to compile information based on 58 responses.

Computer Usage

In order to better understand the technical abilities of my preservice teachers and to help me evaluate their reactions to Web site and WebQuest design, I needed to know how often they participated in computer activities on their own. Knowing how often they used email (Figure 3) and the Web in general (Figure 4) would help me understand their comfort levels with technology. Generally, people who can use email and surf the Web should feel comfortable accessing the Internet.

![Figure 3: Preservice Teacher Email Use](image)

- 0 Days a Week: 7%
- 1-4 Days a Week: 26%
- 5-7 Days a Week: 67%
While 67% of preservice teachers use email almost every day of the week, they spent a little less time accessing the Web for general use. When asked on the survey to write-in what they used the Web for, 26 of 58, or 44%, of preservice teachers specifically listed school-related reasons such as research, projects or information. Since almost half of my students use the Internet for their own education, using Web-based research assignments like WebQuests with their future students should seem feasible and productive. WebQuests provide more structure than an assignment asking a student to research a topic anywhere and any way on the Web. Preservice teachers also mentioned more personal reasons to access the Web like news information, shopping, travel, music, weather, etc. Those preservice teachers who use the Internet are comfortable using it for varied purposes beyond schoolwork;
therefore, after receiving instruction about and practice with finding a variety of resources for WebQuests, preservice teachers should feel comfortable completing the assignment.

**Planned Use for Future Students**

After completing their Web sites and WebQuests, preservice teachers have technology skills such as Web page design, Web publishing, online research, etc. from which they can draw. However, how much they think they might utilize these skills indicates how important they feel technology will be to their future teaching. Preservice teachers were asked to estimate how often they would ask future students to surf the web and access their teaching Web sites. See Figures 5 and 6 for the results.
93% of preservice teachers thought that they would ask students to surf the Web at least once a week. When asked what they will have their students use the Web for, 42 of 58 respondents specifically said for research. Other specified uses included WebQuests, games, grammar programs, and news. Providing preservice teachers with the skills needed to create WebQuests gives them a constructive and useful way to utilize Internet resources for research projects.

Although preservice teachers thought they would be having students access the Internet, not as many of them thought they would have students use their teaching Web site. As Figure 6 shows, 67% of preservice teachers hope to have their students access classroom teaching Web sites.
The major reason for not having students access classroom Web sites for syllabus information or doing WebQuests was that preservice teachers were concerned about students’ access to computers. A study of the NCES of “nationally representative samples of approximately 1,000 public schools” found that “the percentage of public schools connected to the Internet has increased each year, from 35 percent in 1994 to 95 percent in 1999” (United Internet). While these numbers seem encouraging, two concerns arise when faced with this statistic. First, what about the differences between schools with high concentrations of low-income or minority students and higher income white students? The study found that “by 1999, these differences had disappeared; all schools, regardless of level, poverty concentration, and metropolitan status, were equally likely to have Internet access” (United Internet). Second, just
because a school has Internet access doesn’t mean that students can access that technology. Just one Internet connection, even per room, makes accessing the Internet problematic. Who will use the computer? When is the computer available? “In 1994, 3 percent of all U.S. public school instructional rooms were connected to the Internet, by 1999, 63 percent were connected” (United Internet). Within this statistic though, schools with higher concentrations of poverty had fewer instructional rooms with access than those schools with lower concentrations of students living in poverty. In addition, “schools with the highest concentration of poverty had 16 students per instructional computer with Internet access, compared to 7 among schools with the lowest concentration of poverty” (United Internet). Because many WebQuests divide the work into four different roles, 16 students per computer and even 7 students per computer makes completing the WebQuest more difficult. My preservice teachers definitely have reason to question the availability of computers. Perhaps, though, as in the past, Internet access will continue to grow and the digital divide will continue to decrease as Internet access and computers become more widely available and affordable.

Preservice Teachers’ Comfort Levels

Knowing how comfortable my preservice teachers felt using computers by the end of class helped me to evaluate how successful our Web-based part of the course was. Those who felt familiar enough with search engines and knowledgeable enough to sift through the vast amounts of information on the Internet would be better prepared to create WebQuests as a great deal of work goes into finding appropriate

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resources. Preservice teachers were asked to rate their comfort levels for both surfing
the Web and using the computer in general. I also asked them to write in why they
had a particular comfort level. Figure 7 shows the results.

74% of my preservice teachers felt comfortable or very comfortable with
surfing the Web. Most of these students who chose to comment in addition to rating
their comfort levels felt that they were comfortable because they spent a lot of time
surfing the Web and had been using a computer to surf the Web for a long time;
therefore, they weren’t afraid of surfing the Web. Those that did not feel as
comfortable cited reasons such as difficulty finding and sorting through information.
One student didn’t trust the Internet, and another “hated” it. Some didn’t feel
qualified doing even their own research not to mention helping their future students
do research. Time, then, must be taken in the methods course to teach preservice

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teachers how to do Internet research effectively in order to assure that they can become comfortable searching for resources for the WebQuest. Valmont believes,

Students will need to learn to set purposes for accessing the Internet. They will need to learn to conduct efficient information searches and learn to accept or reject information they find as being relevant to their task. They will need to keep accurate records of the sources they find in order to provide proper identification of materials they quote or use in their own reports. ("Technology" 73-74)

But, even if my students did find the information they were looking for, some often couldn't decide if the information was valid. Since my students also revealed that they spend the majority of their Internet time on research, and the main activity that they plan to have students do with the computer is research on the Internet, I know that methods professors need to help preservice teachers become more proficient teachers of on-line research methods.

Figure 8
Preservice Teachers' General Computer Use Comfort Levels

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Not only were preservice teachers comfortable surfing the Web, but 71% also felt comfortable or very comfortable just using a computer (See Figure 8). Of that percentage, many commented again that they had been using the computer for a long time and now use it all the time for a variety of tasks. Two students even wrote in that they couldn’t live without their computers. Of the 14% who felt uncomfortable or very uncomfortable some felt that computers were “frustrating” and “unreliable.” At least three of these students didn’t own their own computers. Methods teachers, then, should also encourage students to overcome their fears about using computers by providing ample time for those student having problems to get help in class. Having the experience and confidence to troubleshoot a hardware or software problem can mean the difference between creating a WebQuest or not.

Learning how to utilize technology in the English language arts classroom is an important part of Secondary English Education methods courses. Western Michigan University’s education program prides itself on producing “reflective practitioners.” In order to do our very best teaching, we have to be willing to evaluate new teaching practices and material, educational and adolescent research, and technology. Selfe believes that

[w]e need to give colleagues the resources to develop an increasingly critical perspective on technological literacy. …we need to make sure that young professionals are not taught simply to use computers. Rather, they should be taught to pay critical attention to technology and the issues that result from, and contribute to, the technology-literacy link. (Technology 156)

My preservice teachers consistently questioned whether they would be able to use technology in their future classroom and were worried that students who did not have
access to computers would fall behind in their work or even be left out. They were not only using technology, but they were also reflecting about how they would use it.
CHAPTER VI

EXPERIENCED WEBQUEST USERS

After my preservice teachers and I corresponded during summer 2002 with teachers who used WebQuests, I realized that the expertise that the experienced WebQuest users had to offer would be invaluable to my understanding of WebQuests. Therefore, I decided to ask those that I had corresponded with and others who had created WebQuests linked to Dodge's WebQuest site to respond to a survey about creating and using WebQuests in classrooms. The survey can be found in Appendix H. The data is based on 35 respondents originating from all areas of the United States and one teacher from Australia.

Background Information

The teachers who have been creating and using WebQuests have extensive teaching experience and technology expertise; therefore, they feel comfortable using technology in their classrooms. 40% of those completing the survey had been teaching for over 20 years. Another 33% had been teaching anywhere from 6-20 years. 80% of them use email, word processing programs, Web page design software, and the Internet, and they feel comfortable and fluent using computers and most software. These two statistics have important implications for preservice teachers. First, they won't necessarily be entering the teaching profession as the only
advocates for using technology in schools. They may have colleagues that know as much as or more about using technology effectively in the classroom. Second, if we want preservice teachers to use technology, we must work to give them comfort and confidence using available technology. Comfort levels definitely affect how many teachers will use technology in the future. In this regard, our task as methods teachers is twofold. We need to provide opportunities that allow preservice teachers to develop technology enriched activities, and, in the process, give them confidence in their technological abilities.

Because my preservice teachers have expressed their concerns over access to computers in the schools, I was interested in knowing what kind of access teachers who used WebQuests have. 64% of respondents have access to 23 or more

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computers connected to the Internet, and of those people 34% have access to more than 30 computers. When asked where students complete WebQuests, respondents were able to choose as many places that applied to their situations. See Figure 9 for their responses. Other places listed include a language lab, a community center lab, and a virtual schooling classroom. The schools that these WebQuest users work in appear to allow for a lot of flexibility as to where students work with computers which may be one reason why these teachers wanted to and were able to use WebQuests in the first place. I wish I had asked some more questions about access to computers since my students often ask me about this when we are discussing WebQuests. Since just over 50% of the respondents indicate that their students can use computers in the classroom, I now want to know how many computers are in their classrooms. Although 74% of the respondents were able to use computer labs, I have found using computer labs can be problematic. I also wonder, now, how many computer labs they have available to them. In the high school where I taught, we had two computer labs that were used by computer classes. We could reserve them during the one class a day each was open. Although we did have access to computer labs, we could rarely utilize them, and we couldn’t plan on using them unless we reserved them way ahead of time. Too many people were vying for the same space. Just over 50% of these teachers also had students who do WebQuests from their own homes. Having the ability to ask students to complete work at home makes using the WebQuest easier. Not only do the respondents have interest in computers, but they also apparently have access to computers so that they can use their technology expertise in their schools.
Knowing about how and when the respondents first learned about and began using WebQuests is also important (See Figure 10). Respondents were asked to mark all ways that applied to their situations and to include other ways they learned about the WebQuest. Those who marked “other” cited workshops and graduate coursework as their main sources of information about WebQuests. The Internet, however, stood out as the main resource for learning about WebQuests. The Dodge WebQuest idea first appeared in 1995 and two respondents explained that they began using WebQuests between 1995 and 1996. 29% began using them between 1997 and 1998, while 46% began using them between 1999 and 2000. I did not learn about WebQuests until 2001 or use them until 2002. The tremendous increase in daily hits the Dodge WebQuest site has seen supports this data. In 1998, the site experienced...
approximately 200-400 hits per day ("Site"). In 1999, the daily hits per day increased from 200-1200 per day ("Site"). In 2000, the number rose to over 1800 hits a day (WebQuest). In 2003, daily hits seem to vary between 2000 and 4000 (WebQuest). The staying power of the concept over the years suggests that it is a successful activity for students, not just a passing fad.

Not only did the majority of respondents learn about WebQuests around the time they were developed, but they also continue to use and create them. The number I was most surprised with was that 15% of respondents have used 11 or more different WebQuests in their classrooms. 16% have used 7-8, 19% have used 5-6, and another 19% have used 3-4. Generally, these teachers have students complete WebQuests once a semester or once a year. However, 14% do one WebQuest a month. One teacher even wrote in that students work on WebQuests three times a week. By continuing to use WebQuests rather than trying one and abandoning it, these teachers endorse WebQuests as a valuable learning activity for their students.

Creation of WebQuests

The first decision WebQuest creators confront is how to work a WebQuest into the curriculum. Will they work it into the existing curriculum or change the curriculum to utilize a WebQuest? The majority of respondents, 79%, work their WebQuests into their existing curriculums by either creating their own or adapting an existing one. One teacher writes, "It wasn't that I changed it [the curriculum] to use the WebQuest. Instead, the WebQuest was one of several tools and strategies that I'd pull from when it was the right fit to enrich and extend student learning." Another
teacher believes that "WebQuests are just a more interesting way to teach the same material." 15% replied that they had both adapted and changed their curriculum to use WebQuests. WebQuests can allow for changes in the curriculum because teachers may have access to sources not available in their schools. One teacher describes, "2 WebQuests are new units that I couldn't teach without the Internet resources because we have not other source for the same information." Others may use WebQuests to help them to develop new curriculum.

### Figure 11
Problems Encountered When Creating WebQuests

Once the decision to use a WebQuest had been made, teachers have two options: create one or adapt an existing WebQuest to meet students' needs. 59% of respondents have created three or more WebQuests that they may or may not have used with their students. 42% have created three or more WebQuests that they have
actually used in their classrooms. The difference in these numbers, 17%, shows that those WebQuests that these teachers have created have been used rather than done for a workshop or class and abandoned. Therefore, the problems that they have confronted while creating WebQuests and what they have learned by the creation of WebQuests will likely be helpful to preservice teachers facing similar issues.

Respondents were asked to write about creating their WebQuests. Figure 11 shows the results of my coding their written-in answers about problems encountered. These results support what my preservice teachers had found when creating their own WebQuests. Time, resources, technical difficulties, and good tasks require a lot of thought and attention when creating a good WebQuest.

**Time**

Whether a preservice teacher or a practicing teacher, time must be taken to create any new lesson. When technology is involved, more time may also be needed to work with software and hardware. One teacher states, "Time is the greatest enemy." However, another comments, "The biggest problem is carving out enough time to work on the project daily. My WebQuest took me about 60 hours to finish because I was new at doing research on the Internet. Now it might take about half to three quarters that time." Although creators must spend time planning the WebQuest as they would any other lesson, the extra time taken in publishing the WebQuest will decrease with experience and familiarity with the software and hardware.
Resources

Three different aspects of resources can cause problems: finding rich, complex, and informative ones, keeping them updated, and maintaining them for the public. It takes time and patience to find Web sites that utilize the multimedia nature of the Internet in addition to sites that require only informational reading. One respondent writes, “The greatest difficulty is finding Web sites other than information-rich – e.g. Emotive, perturbing – that provide students with the opportunity to use higher level thinking skills of evaluation and synthesis of conflicting/challenging stimuli.” In addition, the creator must assess the site’s credibility and accuracy. Not only is it hard to find useful sites, but it’s also hard to keep track of them. Several respondents found that changing URL’s and dead sites caused a lot of problems when trying to maintain a WebQuest. Finally, one teacher was surprised to find that keeping his/her WebQuest up-to-date would be a responsibility. The respondent writes,

An unexpected finding – maintaining the WebQuest can be a beast. On one hand, they provide a ‘snapshot’ in some regards of my teaching/classroom at one particular moment in time. On the other, they have grown into a resource used by many other teachers. Posting the WebQuest online established a responsibility to a larger community of learners than that which filled my classroom.

Because teachers post WebQuests on the Internet, the benefits of the lesson go beyond their own students. Even the WebQuests created by preservice teachers become a resource for practicing teachers. Creating and posting a viable and well-
thought-out WebQuest becomes an important goal when considering the potential audience who may view and use it.

Technical Difficulties

Technical difficulties in the creation phase often revolve around Web page design software, though problems with hardware also occur. Learning how to manipulate text, images, and hyperlinks to get the exact layout wanted can be difficult and time consuming, and having the WebQuest turn out exactly as the creator would like may not happen. In addition, the network firewall may not allow creators to access resources that might enhance the WebQuest. Experience can usually solve problems with software, but some schools' computer-use policies control what can be accessed. Hardware problems may include the computer or network running slowly or crashing. One respondent writes, “At times, our network firewall prohibits us from getting to some sites. Sometimes our connection is slow and unreliable. Some fonts and graphics don’t always transfer to the final WebQuest page.” Because the WebQuest relies on graphic as well as textual images, having the entire activity appear as it should is essential to its success and having the computers functioning well helps the activity run more smoothly.

Good Task

Like my preservice teachers, experienced WebQuest teachers also found that creating a good task can be difficult. Rather than asking students to complete tasks that allow them to cut and paste information as they may have done with traditional
research reports, WebQuest projects must “involve higher level tasks, such as comparing, contrasting, making choices, and weighing information to make judgments and conclusions” (Balajthy 207). Students should be required to do something with the information, not just find it and recount it. One respondent finds that “My biggest difficulty is being creative in trying to come up with an authentic task for students.” Another finds that “making the project a real world experience is challenging.” It is the teacher’s responsibility to create a suitable task that is both interesting and challenging and well-suited for a Web-based lesson. Valmont and Wepner believe that

Although some people believe that information equals education, teachers know that understanding is not automatic with the acquisition or memorization of facts. Knowing how to apply information, how to use new ideas in new ways, how to evaluate information, and how to extrapolate or go beyond basic information are important aspects of learning. Today’s students must learn how to think and how to use the vast amount of unfiltered information that is available to them through the Internet and other technological forms. (9)

Since the task forms the core of the WebQuest, time and thought must be committed to generating an engaging one. Tasks that ask students to synthesize, analyze, or evaluate information from the Internet rather than cut and paste information support higher-order thinking skills.

Using WebQuests

I also asked respondents to comment on problems experienced while using the WebQuest in their classrooms. Figure 12 shows the results of my coding of their answers. Technical difficulties stood out as the most common problem. Some
problems included facts that can't be controlled: the Internet being slow or down, the computer crashing, the school network being down, and students having problems with their home computers. Because we were working in a wireless computer lab, my preservice teachers experienced all of these problems both in and out of class. They have experienced the frustrations of technical difficulties and realize that back-up plans and flexibility are needed in a classroom that uses computer technology.

![Figure 12 Problems Encountered When Using WebQuests](chart)

Not only do WebQuest creators have difficulty finding time to create the WebQuest, but they also find that planning the time for the students to do the WebQuest can be problematic. Teachers commented that they take more time than planned, often due to technical difficulties or the inability to access computers when needed. Therefore, time is taken from the curriculum because of technology issues; time that could have been spent on content learning. One teacher comments that
allocating enough time to complete the tasks to the level of research, thinking and the group synthesis process desired is the major problem in a curriculum which is controlled by a central Education Department and where much of the emphasis is on knowledge acquisition rather than encouraging thinking skills development.

Although higher-order thinking skills, of course, should be called for in a mandated curriculum, sometimes just fitting in all of the curriculum materials takes up the majority of class time. Therefore, covering the material of the curriculum takes precedence over time-intensive creative lessons like WebQuests.

The challenges of students reading hypertext lead to another area of concern. One of the benefits of using a Web-based activity like the WebQuest is the non-linear approach to research and reading. Though the teacher provides the resources needed to complete the task, seemingly limitless links can lead students away from the thoughtfully selected resources. Valmont and Wepner point out that although some Web sites may have linear text, generally Web sites have nonlinear texts.

Hypertext is nonlinear in the sense that readers can, at will, move to another piece of electronic text created by the same author in the same Web site; or readers can be led to entirely new Web sites written by others, thereby creating a variety of paths that readers can take in their search for meaning. (7)

Students will need extra guidance in learning how to handle the multitude of information responsibly and effectively. Teachers, then, should encourage students to investigate that information which will aid them in finishing the task rather than distract them. Valmont and Wepner believe that “the intelligent processing of multimedia-based electronic texts must be part of an array of skills that students acquire as they progress through school” (7-8). One respondent agrees. “Students wanted to print everything on their screens – the antithesis of some of my
instructional goals. We had to work to become screen literate—which meant time spent exploring what it meant to be a reader of hypertext.”

Teachers also showed concern for how hypertext can affect student motivation and on-task time. Although the majority of teachers surveyed felt that WebQuests can be a motivating activity, some believed there will always be those students who resist any type of assignment. No matter what the assignment is and whether it is classroom or Web-based, some students will have no interest in completing the assignment at all. One teacher writes that “some students don’t want to read and must be encouraged to participate during each visit to the lab.” Some students may not participate just because the WebQuest is Web-based. In fact, students unfamiliar with computers may resist the WebQuest more than they would have resisted a non-Web-based assignment. Motivating a diverse group of students will always be a part of the teacher’s job. The WebQuest functions as another activity which teachers can use to meet the needs and interests of all students.

Attention must also be paid to students who appear as if they are engaged with the computer but who are actually just pointing and clicking on the hypertext. The cause for this behavior must be assessed. Do the students understand the assignment? Those students who are unfamiliar with computers can be lost in a sea of hypertext and may not want to ask for help. Although they may be busily working at the computer, they may not be getting the information needed to complete the task. Do the students know how to move beyond just looking to learning? Spending time learning print and nonprint research skills will help students with any project. One teacher writes, “Final presentations often do not have the depth needed simply
because the students do not want to take the time to read the information on the
screens. - They prefer to look at pictures and jump to new links.” Final products that
truly call for higher-order thinking cannot be successfully completed just by viewing,
cutting, and pasting information. Finally, do the students need to be redirected from
off-task sites? Keeping students on task challenges teachers every day, and
computers can offer a variety of distractions. Working on the Internet may be a
novelty for those students who don’t have computers at home, and for those that do,
accessing their favorite sites or email can be a distraction.

A final concern about using WebQuests is managing collaborative work. The
key to making the collaborative aspect of WebQuests work comes before the
WebQuest even begins. Students must be trained how to work effectively with others
for all lessons, not just WebQuests. As a high school teacher, I had been formally
trained to use the Kagan cooperative learning structures. I learned how to facilitate
group interactions with students that would allow them to do some independent work
while also being held responsible for group outcomes. For example, in “Think-Pair-
Share” students would individually free-write about a poem read the night before.
Then, students would pair up and discuss their thoughts. Finally, students could share
their ideas within their groups of four or perhaps in front of the whole class. I always
began my high school classes by explaining and modeling what was expected in
cooperative groups. However, some problems will still occur even if students have
been properly trained in cooperative work. “Some students truly need more structure
and do not do well in an engaged learning environment,” one teacher writes. And
another teachers adds that “different groups [will be] in different places doing
different things." Therefore, teachers need to realize that classroom management will be an issue even though students ideally need very little teacher direction. Close teacher observation and participation help students to stay on task and to work well together.

Final Products

I was also interested in the kinds of products that result from respondents' WebQuests. Respondents could mark all final products that they had students create and supply others not included on my list. Figure 13 shows the number of responses each of the provided products from the survey received. Many people also supplied more specific or different options for final products. These, like those that I provided in my survey, fall into some broad categories.

Written – newspapers, essays, letters, books, plays, memos, trip itineraries, magazines, newsletters, annotated bibliographies, poems, informational brochures

Performance Products – skits, songs, monologues, speeches in character

Oral Presentations – general presentations, discussions in forums, debates

Technical Products - Power Point presentations, Web pages, digital narratives, virtual museums, Hyper Studio presentations, Inspiration software concept mapping

Art-Related Products – Posters, scrapbooks, craft projects, murals

Of course, some of these categories overlap in that a written project like a travel brochure may be completed on Microsoft Publisher, incorporating technology, artistic
images, and written work. A well-balanced combination of traditional and technological final products emerges. Just as resources can be print and nonprint, final products can be either. Nearly 30 respondents chose presentations, which I assume must be print in nature, and Power Point presentations, which would be nonprint. Giving students a variety of activities and assignments to complete allows teachers to meet a diverse group of learners' needs.

![Figure 13: Products that Result from the WebQuest](chart)

**Evaluation of Using WebQuests**

Because WebQuests do take so much time for teachers to create and students to complete, assessing the effectiveness of the activity is crucial. 69% of respondents felt that the WebQuest was more effective than the previous methods used to teach the particular skill or concept addressed by the WebQuest, while another 23% felt the
WebQuest was just as effective. Therefore, 89% found that using the WebQuest complemented their existing curriculum. The respondents were also asked to cite specific benefits for their students' learning. They could select all benefits that they felt applied to using WebQuests in their classrooms. Figure 14 represents the results. All 35 respondents felt that WebQuests allowed them to use technology effectively in their classrooms, an important consideration for teachers trying to incorporate technology into the traditional classroom. Teachers also cited benefits from three integral components of the WebQuest: cooperative learning, tasks requiring higher-order thinking skills, and assessment by rubrics. Asking students to work together to complete a challenging task and then assessing them with a clearly defined rubric allows students to progress through the WebQuest as independently as possible, working to construct their own knowledge. It's no wonder that 33 teachers thought that another benefit of the WebQuest was that they could work as facilitators for student learning.

Overall, 86% of respondents found that using WebQuests benefits their classrooms. When asked to rate WebQuests as a learning strategy in the English classroom on a scale of 1-7 with 1 being an excellent strategy, 61% rated them with a 1, while another 25% gave a rating of 2. The satisfaction shown by experienced teachers who use WebQuests solidifies my decision to ask preservice teachers to create WebQuests. I find it to be an excellent learning strategy for them, allowing them to combine content and pedagogical knowledge to create a challenging task while also implementing technology in their lessons. I have been satisfied with their WebQuests as representations of their learning in our methods course.
Also important, though is the reaction of high school students to the WebQuest. Figure 15 demonstrates that teachers who used WebQuests thought that the majority of their students responded well to using WebQuests. 58% of them felt their students loved doing WebQuests and would enjoy doing others, while another 25% saw their students as more complacent but still accepting of the WebQuest. Equally important a percentage, though, is that none of the teachers felt that their students disliked WebQuests or computers. These numbers aren’t surprising since Figure 6.6 demonstrates that 31 of 35 teachers felt one benefit of using WebQuests was higher student motivation.
Advice

The following section contains advice offered by experienced WebQuest teachers about creating and using WebQuests taken from survey answers. Those ideas presented were chosen based on their frequency of occurrence after coding written comments to the survey.

1. Plan, plan, plan.
   a. “Planning is the most important stage.”
   b. “Focus the project tightly. Know what will be required from the student and work backwards.”
c. "Know the WebQuest intimately! It is essential for me to know every detail, step, and link from the WebQuest in order to fully assist and guide my students in the project."

2. Be patient and flexible.
   a. "Be flexible! Technical difficulties have a solution—be creative and calm in figuring one out. Schedule more time than necessary for technical difficulties and 'last minute' problems that may arise."
   b. "Set realistic attainable goals for your students, even if that means modifying time limits and perhaps adding or changing components of the WebQuest for use in your own classroom. No one knows your students like you do and a WebQuest is not a 'one-size-fits-all.'"

3. Create a challenging task.
   a. "The type of learning that a WebQuest affords and challenges students to experience requires exploration and time. The question has to matter. It needs to be an authentic task that allows students to own the process and the learning."
   b. "The end product should require students to synthesize or make a judgment with the knowledge they gain—it should avoid just a reporting of facts."

4. Be clear in process steps and scaffolding provided: "Be very methodical in outlining the steps of a WebQuest, so it's easier for students to follow the step-by-step procedure to the final assignment. Include scaffolding (i.e. worksheets or such) for students to be completing DURING the project; this
helps the teacher monitor whether students are on task or not. Include
samples and/or templates for the final project.”

5. Take the time to find quality resources, keep links up-to-date, and teach
students how to use these resources.

a. “WebQuests were most powerful when they allowed us to tap into a greater
community.”

b. “[R]evie[w] Websites for content and accuracy ... check links from the sites
used, [and] ... recheck links.”

c. “Students need to be proficient with researching on the Internet. Many times
students expect to click on a link and the answer to just jump up on the screen;
they don’t realize that the WebQuest links are a portal from which they need
to explore to find the information needed.” Learn how to find and maintain
them.

6. Teach students how to collaborate.

a. “Limit the students to ONE computer per group. Enforce cooperation.”

b. “Collaboration is something that has to be learned and therefore opportunities
for it must be created.”

c. “I developed a rubric for helping students evaluate and understand excellent
strategies for cooperative work versus weak strategies. The rubric is used
eyearly in the year during very short cooperative assignments to familiarize the
student with what is expected during cooperative work.”

d. “Teachers who are already comfortable acting as facilitators of student
learning are the ones who seem to create powerful learning experiences for
student work with WebQuests. I really think that needs to be in place beforehand."

7. Always be prepared for technical difficulties.
   a. "Always have a back-up plan."
   b. "Teach them the computer skills they will need."

8. Allow time for learning about and reflecting on the WebQuest as an instructional tool: Have students decide "[w]hat worked well, what didn’t – why not [and] if we did another WebQuest what topic would you like to investigate and how would you approach it differently."

9. Learn how to find good WebQuests to adapt to your classroom.
   a. "A beginning teacher has an entire project laid out that they can adapt as they see fit. It gives them a great experience in putting together a sometimes major project without the headache of creating every step of it."
   b. "I am a strong believer in the use of WebQuests if properly constructed through a combination of technology that allows for online thinking and reflection, pedagogical principles, and appropriate scaffolding. Unfortunately, many ‘Webquests’ do not fit this design brief as proposed by Dodge and March."

10. Create WebQuests that can be used across the curriculum: "You need to get the whole faculty thinking along the lines of WebQuests. That way you can integrate many of the subjects. For example, Lord of the Flies connects to the Cold War in history, environment in science, group dynamics in math, plus psychology, art, even physical education!"
11. Expand technology knowledge: "A teacher's knowledge of the computer and various software will allow him/her to create a more dynamic WebQuest (Digital Imaging, Digital Video, Digital Audio, Inspiration, etc.). With only a basic knowledge of word processing and Power Point, teachers will construct WebQuests that are not much more than a glorified worksheet."

The advice and information shared by the 35 teachers mirrored the topics I had tried to focus on when teaching preservice teachers about the WebQuest: creating quality tasks, writing clear directions, providing scaffolding, and utilizing cooperative groups. The only topic not really addressed was evaluation of their students' final products other than knowing that the majority of them used rubrics and/or checklists. Their comments also mirrored that of my students. Quality WebQuests are hard to plan for and make. Invaluable, too, were the responses that reinforced my feeling that WebQuests are sound educational tools. These experienced teachers have created and/or used them over a matter of years. They feel that WebQuests enhance their curriculum, so they take the time and effort to create and use them. I, too, feel that having students create WebQuests in the English language arts methods course is worth both my and their time.
CHAPTER VII

CONCLUSION

A lot of research and preparation went into my decision to begin and continue teaching preservice teachers how to create WebQuests. Learning theories and professional standards reinforce my belief that WebQuests are sound educational activities that allow preservice teachers to synthesize English language arts content information with sound teaching strategies. Nonetheless, personal testimony, both from experienced teachers who have used WebQuests and my preservice teachers, makes the most impact on my decision to continue teaching this strategy. One area that I have concern about, though, is whether or not preservice teachers will be able to use WebQuests in their intern teaching and in their own classrooms. While I have very little data indicating how my preservice teachers actually use their WebQuests, I do know that they have cited benefits to creating their WebQuests. Figure 16 represents the percentage of students from each class who cited the WebQuest as one of the top four “strategies/ideas/lessons” that they learned from our class.

The majority of students believed that learning how to create WebQuests was an important part of their learning in my methods course.

Trying to ascertain if preservice teachers had been able to use their WebQuests, I sent out an email to the 63 students I had had in my three classes...
However, I only received responses from 12 of these people. Once preservice teachers do their intern teaching and then graduate, communication via email addresses from the time of our class can be problematic. Of the 12 who actually responded, only three had used WebQuests in their intern teaching. Though I'm pulling my information from a very small sampling of preservice teachers, I do believe that the experiences they had with WebQuests will help me improve how I ask future students to create WebQuests. In addition, what little data I do have about preservice teachers who used WebQuests in their intern teaching validates much of the same information I received from experienced WebQuest teachers. I include the following data as a springboard for future study.
The three intern teachers were working in large urban public high schools with mentors who had not heard about WebQuests. One intern teacher worked in a high school with two computer labs that contained 40 computers and a media center with 60 computers. The other two intern teachers worked in a high school that had two computer labs each with 28 working computers that were available at the time of the WebQuest. However, one of these intern teachers also taught in a classroom that contained 20 computers and that is where his students completed his WebQuests. Each intern teacher also felt that at least 50% of their students had access to computers outside of school. Because these intern teachers had access to computers and they had researched and created WebQuests, they were confident enough to suggest using WebQuests to their intern teachers who knew nothing about the activity. One intern teacher writes, “English 480 gave me enough background that I was able to work and teach with the WebQuest.” All three cited that they felt very comfortable using the WebQuest and cited that the methods course had prepared them well enough to use this Web-based activity. With obvious pride, another intern teacher writes, “A couple of teachers heard through the grapevine what I was doing [the WebQuest] and asked me to show them what it was. I was even able to show the head of the English Department how to incorporate it into her classroom.” Not only did she feel comfortable asking to use a WebQuest during her intern teaching and then actually using one, but she also felt confident enough to share the idea with her peers. One intern teacher even used two WebQuests during his intern experience.

One downfall of teaching a methods course without a field experience requirement is that preservice teachers create lesson plans and activities for
hypothesetical classes. When I ask them to create their WebQuests, I encourage preservice teachers to think carefully about choosing topics that they might actually teach someday. Though I hope that they will be able to use their own WebQuests, just creating a WebQuest gives them the needed experience to make creating another one easier and the knowledge to find and adapt existing WebQuests to their curriculum. Only one of the three students used the WebQuest that she had created in class. The other two students used WebQuests they found on the Internet. One student found hers through a Google™ search while the other student, who used two WebQuests, found one through a Google™ search and one from Dodge’s WebQuest site. The student who used her own had to modify it to “make it simpler for [her] students and had to cut some parts out because [they] didn’t have enough time in [their] overall schedule for the semester.” The student who used two WebQuests did not alter them, but he did complete the WebQuests in order to better understand the WebQuests and confirm that they would work for his students. He must have known that as one of the intern teachers commented, it is important to know the WebQuest “inside out.” The third student found her WebQuest through a Google™ search and found no reason to alter it for her students.

When using their WebQuests, intern teachers realized that students needed more guidance than expected. One intern teacher comments that she learned “[t]hat there is a lot more to it [a WebQuest] than putting a project on a Web site. I think that any WebQuest I use I will have to tailor specifically to my class and make certain changes.” She understands that the WebQuest allows teachers to meet the needs of her current students at the time she wants to use it. To introduce the activity, one
One intern teacher did a mini lesson on what WebQuests are. Being familiar with and knowledgeable about WebQuests in general would make completing one easier. In addition, students must be able to understand their roles in order to do them well and then work with the rest of their group to create their final product. One intern teacher describes, “At first my students were confused and kept looking to me for the process. They could not understand that the WebQuest would guide them through the whole project. At the end they loved the independence and kept asking to do another WebQuest.” To help her students deal with this independence, another intern teacher tried to help her students by printing group and individual packets from the WebQuest to keep them organized and on-task.

After completing the WebQuest, the three intern teachers communicated nearly all positive outcomes of the activity with only one negative comment. All three believed that their students were interested in doing a Web-based project. For one intern, the WebQuest caught the attention of students who didn’t like the book on which the WebQuest was based. He writes, “The really liked it [the WebQuest]. Some didn’t care much for the book, but they enjoyed doing the WebQuest. They had fun with the different job titles.” The WebQuest offers one more way that teachers can help all students learn. Another benefit that all three cited was being able to use cooperative groups. “It was something new the students never used before. Using a WebQuest was a chance to have them work in cooperative groups and use technology.” Another intern teacher comments, “The students worked well in their groups. I think they worked harder on this assignment then another one. They really enjoy using the computers and working in groups.” The only negative
outcome had to do with the classroom management issue of student groups getting along and the uncontrollable attendance issue.

When preservice teachers learn how to make WebQuests, they acquire many skills through the experience that they can apply to other situations. First, they learn how to grapple with the technical aspects of using computers firsthand. Knowing how to use Web page design tools, scanners, and other related technology and how to deal with technical difficulties give them a comfort-level foundation that further computer experience can build on. Second, they learn how to question why and what they will teach with technology. Through confer and class, students discussed access issues and debated whether or not they even needed to learn how to teach with technology. While making the WebQuests with their groups, students had to choose appropriate content and resource material and effective learning strategies to form a task and process that both challenged and motivated their audience. All of these skills help develop competent English language arts teachers.
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“Wrinker.” 2 Nov. 2003


Appendix A

How the WebQuest Fulfills National and International Standards
NCATE Professional Unit Standards

The National Council for Accreditation of Teacher Education (NCATE) provides both general teacher preparation standards and specific standards for the certification of teachers of English, standards that affect College of Education and English Departments. In the general 2002 edition of NCATE’s Professional Standards, emphasis is placed not only on whether the institution provides and implements curriculum to meet the standards but also on whether or not the students demonstrate in some measurable way that those standards have been met. Therefore, methods faculty not only have to provide preservice teachers with the opportunities to meet these standards but also have to make sure that they have learned how to utilize what they have been taught.

<table>
<thead>
<tr>
<th>National Council for Accreditation of Teacher Education Unit Standards</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard</td>
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</table>
1. Candidates preparing to work in schools as teachers or other professional school personnel know and demonstrate the content, pedagogical, and professional knowledge, skills, and dispositions necessary to help all students learn. Assessments indicate that candidates meet professional, state, and institutional standards.

Because the WebQuest unit occurred at the end of the semester after discussing different methods of teaching writing and literature, preservice teachers began the semester focusing on content knowledge and learning how to help their future students succeed in learning. Synthesizing their pedagogical and content learning, they had already learned and practiced how to incorporate their knowledge of literature into lesson plans written to demonstrate their knowledge of discussion techniques and assignment and assessment creation. The WebQuest allowed them to further demonstrate this knowledge while also allowing them to work with a different medium: the Internet. Web-based lessons require different modes of teacher explanation and instruction and student participation. In addition, the main challenge in creating a successful and effective WebQuest centers on creating a task that is challenging and interesting and appropriate for completion via the Internet. Before even starting to put the activity together, preservice teachers identify a task that meets the content goals they have for their students and then ascertain whether using technology would be an appropriate way to turn the lesson into an interesting, meaningful activity for students to complete. WebQuests also further content knowledge and help students learn because tasks are meant to draw upon content to activate higher-order thinking skills. The WebQuest rubric assessment used from Dodge’s WebQuest site clearly guides the evaluator to look for important content and pedagogical issues: prior knowledge, motivation, standards, higher-order thinking, scaffolding, cooperative learning, and rubrics. The WebQuest was another way for preservice teachers to demonstrate that they could combine their content knowledge with their pedagogical
6. The unit has the leadership, authority, budget, personnel, facilities, and resources, including information technology resources, for the preparation of candidates to meet professional, state, and institutional standards.

The educational institution must provide preservice teachers with a high-quality learning experience so that they can meet the standards required of them. Mindful of the importance technology now plays in today's world, Western Michigan University provides programs and assistance for professors and instructors to utilize technology in their courses. Western Michigan University provides the wireless computer lab and trains professors to use it so students can experience and use technology in a thoughtful way.


NCATE English Program Standards

The most current version of NCATE's English content standards, 1998, was created by the “learned society” of the National Council of Teachers of English. Like the professional unit NCATE standards, knowledge of content, theory, and practice dominate the English language arts standards, and I easily found that teaching
preservice English teachers to design WebQuests allows them to meet several content standards. The WebQuest clearly adheres to technology as well as content-based and pedagogically oriented standards.

<table>
<thead>
<tr>
<th>National Council for Accreditation of Teacher Education Program Standards</th>
<th>How the WebQuest Fulfills the Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.0 Attitudes for English Language Arts - Through modeling, advisement, instruction, related experiences, and assessment, the program promotes and strengthens professional attitudes needed by English language arts teachers; as a result, the candidate will</td>
<td>WebQuests should have students divide up the work so that each student does some independent work before joining the rest of the group to assemble the final product. These roles should take into consideration that students learn differently and have different interests. When roles are carefully developed, all learners have the opportunity to succeed.</td>
</tr>
<tr>
<td>2.1 demonstrate a respect for the worth and contribution of all learners</td>
<td>After the WebQuest is complete, preservice teachers complete their peers' WebQuests and then peer-review them. By doing these two activities, preservice teachers are able to work together to make the best WebQuest possible. In addition, preservice teachers discuss what and why they do WebQuests via in-class discussions and on Confer, our electronic conference. They can voice their opinions about the assignment and bring up issues like classroom management and computer access, and at the end, they reflect on the problems they encountered during its creation, the benefits of using WebQuests, and whether or not they will use their WebQuests in the future.</td>
</tr>
<tr>
<td>2.3 engage in reflective practice and pursue continued professional growth and collaboration with colleagues</td>
<td></td>
</tr>
</tbody>
</table>

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2.4 help students develop lifelong habits of critical thinking and judgment

Because the WebQuest should ask students to use higher order thinking skills, it is one activity that helps strengthen those habits. In addition, the conclusion portion of the WebQuest should point out or ask students to consider how they can apply the information or skills gained from the WebQuest to future learning.

2.5 take informed stands on issues of professional concern

Preservice teachers, after reading introductory material about WebQuests and completing the WebQuest, can articulate why the WebQuest benefits students and represents one example of teaching with technology.

3.0 Knowledge of English Language Arts - The program prepares English language arts teachers who are knowledgeable about language, literature, oral, visual, and written literacy, print and nonprint media, technology, and research theory and findings.

3.6 The program prepares the candidate with knowledge and understanding of the range and influence of print and nonprint media and technology in contemporary culture; as a result, the candidate will

By designing a WebQuest, preservice teachers are asked to look at technology in a way that they may not have done before. Though many people may know how to "surf" the Internet, research for information, and use it for entertainment purposes, the development of the WebQuest allows preservice teachers to consider how to best use the resources available on the Internet to guide their future students’ learning. While searching for resources to include in the WebQuest, preservice teachers are reading and evaluating the credibility, usefulness, and appropriateness of resources, both print and non-print, for English language arts instruction.

3.6.2 construct meaning from media and non-print texts
<table>
<thead>
<tr>
<th>4.0 Pedagogy for the English Language Arts - The program enables the candidate to acquire and demonstrate the dispositions and capacities needed to integrate knowledge of English language arts, students, teaching, and practice; as a result, the candidate will</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.1 examine, evaluate and select resources, such as textbooks, other print materials, video, film, recordings, and software which support the teaching of English language arts</td>
</tr>
<tr>
<td>When choosing resources for their students to access, preservice teachers must decide if Websites are reliable, relevant to the topic of the WebQuest, exploitive in any way, and easy enough for their students to maneuver. 15 of 62 of preservice teachers, or _ of them, found that this part of the WebQuest development was difficult. Ample time and instruction on how to find appropriate and useful resources must be given so that preservice teachers feel comfortable with this important step of the WebQuest.</td>
</tr>
<tr>
<td>4.2 design instruction to meet the needs of all students and provide for students' continuous progress and success</td>
</tr>
<tr>
<td>To meet all their future students' needs and provide multiple instructional environments, preservice teachers can design WebQuests that require their future students to utilize any of Gardner's multiple intelligences. For example, each WebQuest requires linguistic and interpersonal skills. Depending on the final product required, logical/mathematical, spatial, intrapersonal, musical, and/or bodily/kinesthetic intelligences may be activated.</td>
</tr>
<tr>
<td>4.3 organize classroom environments and learning experiences that promote effective whole class, small group, and individual work</td>
</tr>
<tr>
<td>Because WebQuests require both individual and group work, preservice teachers have multiple ways in which they will have students work with information. In addition, the task can require students to present information to the whole class.</td>
</tr>
<tr>
<td>4.6 incorporate technology and print/non-print media into instruction</td>
</tr>
<tr>
<td>Designing the WebQuest incorporates use of the Internet as well as other technologies including PowerPoint presentations, Web site design, multimedia projects, digital photography, image scanning, image manipulation, etc., all of which can be part of the WebQuest students complete, too.</td>
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<tr>
<td>4.7</td>
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<td>4.11</td>
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</table>


**ISTE Standards**

The International Society for Technology in Education (ISTE) provides six technology standards for preservice teachers and performance indicators for each standard to help assess whether the standard has been met in its document *National Educational Technology Standards for Teachers* (NETS*T*). ISTE also provides performance profile indicators for each step of the teacher preparation process as another way for assessing whether the six technology standards have been met. The four steps include general preparation, professional education, student teaching/internship, and first-year of teaching. NCATE, Western Michigan University, and the State of Michigan have adopted ISTE’s standards. For my methods courses, I focused on the 24 profile indicators for professional education. To
determine how my students were meeting these indicators I looked at how they were experiencing and working with technology. My preservice teachers access my teaching Website and on-line syllabus, participate extensively in our electronic conference, make their own teaching Websites, develop WebQuests, and evaluate their own and others' WebQuests.

<table>
<thead>
<tr>
<th>Performance Indicator</th>
<th>How the WebQuest Meets the Performance Indicator</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1.</strong> Identify the benefits of technology to maximize student learning and facilitate higher order thinking skills.</td>
<td>Because preservice teachers can provide a variety of Web resources and print resources, students have the benefit of high quality information that will allow them to complete the assigned task. The assigned task should ask students to analyze, synthesize, or evaluate information in order to create their final product. The task should not allow students to simply cut and paste information.</td>
</tr>
<tr>
<td><strong>6.</strong> Identify specific technology applications and resources that maximize student learning, address learner needs, and affirm diversity.</td>
<td>By designing a WebQuest, preservice teachers use a specific technology application to maximize student learning. The resources that they choose to include in their WebQuests should take advantage of the timeliness and variety of information available on the Internet. The different roles that students take in the WebQuest should allow for differences in learning styles and interests.</td>
</tr>
</tbody>
</table>

*International Society for Technology in Education*

*National Educational Technology Standards for Teachers*

"Profile for Technology-Literate Teachers Professional Performance Profile"
<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>9.</strong> Plan and teach student-centered learning activities and lessons in which students apply technology tools and resources.</td>
<td>If preservice teachers carefully plan the task and process section of the WebQuest, their students should be able to complete the activity on their own via a computer. The teacher's role is one of facilitator, finding ways to help students discover information and complete their roles and final products on their own. Students become responsible for their own learning rather than expecting the teacher to tell them all that they need to know.</td>
</tr>
<tr>
<td><strong>10.</strong> Research and evaluate the accuracy, relevance, appropriateness, comprehensiveness, and bias of electronic information resources to be used by students.</td>
<td>As my preservice teachers and WebQuest teachers surveyed have testified, finding appropriate and useful resources is very difficult. Methods teachers should work with preservice teachers to develop a plan for doing productive resource searches and to evaluate the resources they find. The quality of resources will definitely affect the final products that students produce.</td>
</tr>
</tbody>
</table>

Source: “Profile for Technology-Literate Teachers: Professional Performance Profiles.”

Appendix B
Teaching Web Site
Your teaching portfolio Web site needs to be thematically and artistically coordinated and include, at a minimum, these six pages:

1. A home page with at least a site title, welcome to students, your name, a picture of yourself, visual images, links to your other pages, and a working e-mail link to you.

2. A teaching philosophy page encapsulated and condensed into approximately ten-one sentence statements. These statements must refer specifically to multiple aspects of English language arts teaching including literature and writing, use current professional and theoretical language, and be written so it can be understood by future employers, colleagues, students, and parents.

3. A student page that contains the following entries:
   a. Your own annotated recommended reading list for your students. Include a minimum of ten entries. Use only books you have read, include some multicultural and young adult titles. Make it visually appealing to catch students' interests.
   b. An annotated list of at least 20 links and resources that will be interesting to students and relevant to your teaching. For example, if you think you would like to teach To Kill a Mockingbird someday, it would be neat to have some sites linked to materials that would support learning about the novel. Links might include background on the author, commentary on the novel, sites about lynching, race relations in the South, etc. In this way you begin
creating your own electronic textbook targeted to your specific class.

c. A place to publish student work in the future.

d. A link to your WebQuest.

4. A parent page that allows you to post student work and grades (you might try setting up some sort of a spreadsheet or table) and that provides them with at least five links to Web sites concerning them.

5. A teaching page that contains the following entries:
   a. Individualized reading program.
   b. All lesson plans.

6. A professional page where you can post your professional materials and accomplishments from your teacher preparation courses and intern teaching. Include your résumé. This page (or pages) can serve as your teaching portfolio and may be especially important for your intern teacher supervisor and future employers.

General Requirements

1. Each page needs to have your name, an e-mail link to you, and the date the page was last modified.

2. Link all of your pages to one another. A navigation bar that can be used on all of your pages would be easiest to do.
3. Design your pages with your future teaching in mind and make it attractive to your future students, their parents, and your teaching colleagues.

4. Your site needs to be academically and intellectually sound, including meaningful information, activities, and links.

5. Artistically coordinate backgrounds and structures that link your site together graphically and thematically. Creativity counts!
Appendix C

A WebQuest about WebQuests
A WebQuest About WebQuests

Middle School / High School Version

by Bernie Dodge
Ed Tech Department, San Diego State University

Introduction

Since early in 1995, teachers everywhere have learned how to use the web well by adopting the WebQuest format to create inquiry-oriented lessons. But what exactly is a WebQuest? What does it feel like to do one? How do you know a good one when you see it? In the space of 90 minutes, you're going to grapple with these questions and more.

The Task

To develop great WebQuests, you need to develop a thorough understanding of the different possibilities open to you as you create web-based lessons. One way for you to get there is to critically analyze a number of webquest examples and discuss them from multiple perspectives. That's your task in this exercise.

By the end of this lesson, you and your group will answer these questions:

1. Which two of example WebQuests listed below are the best ones? Why?
2. Which two are the worst? Why?
3. What do best and worst mean to you?

The Process

1. First, each participant will have a hard copy of the worksheet. To answer the questions given above, you'll break into groups of four. Within the group, each of you will take on one of the following roles:

   • The Efficiency Expert: You value
   • The Affiliator: To you, the best
time a great deal. You believe that too much time is wasted in today's classrooms on unfocused activity and learners not knowing what they should be doing at a given moment. To you, a good WebQuest is one that delivers the most learning bang for the buck. If it's a short, unambitious activity that teaches a small thing well, then you like it. If it's a longterm activity, it had better deliver a deep understanding of the topic it covers, in your view.

The Altitudinist: Higher level thinking is everything to you. There's too much emphasis on factual recall in schools today. The only justification for bringing technology into schools is if it opens up the possibility that students will have to analyze information, synthesize multiple perspectives, and take a stance on the merits of something. You also value sites that allow for some creative expression on the part of the learner.

The Technophile: You love this internet thang. To you, the best WebQuest is one that makes the best use of the technology of the Web. If a WebQuest has attractive colors, animated gifs, and lots of links to interesting sites, you love it. If it makes minimal use of the Web, you'd rather use a worksheet.

2. Individually, you'll examine each of the sites below and use the worksheet to jot down some notes of your opinions of each from the perspective of your role. You'll need to examine each site fairly quickly. Don't spend more than 7 minutes on any one site. Your instructor will keep time using this clock:

Here are the sites you'll be analyzing:

- Who Wants to Be a Millionaire? Analyze several paths to success
- Gallery of Art-i-Facts Design and fill an art museum wing
- Conflict Yellowstone Wolves Take a stand on the reintroduction of wolves
- The Gilded Age Create a documentary on this historical period
- Extra, Extra Analyze the world of the Great Gatsby

3. When everyone in the group has seen all the sites, it's time to get together to answer the questions. One way to proceed would be to go around and poll each team member.
for the best two and worst two from their perspective. Pay attention to each of the other perspectives, even if at first you think you might disagree with them.

4. There will probably not be unanimous agreement, so the next step is to talk together to hammer out a compromise consensus about your team's nominations for best and worst. Pool your perspectives and see if you can agree on what's best for the learner.

5. One person in each group should record the group's thoughts.

6. When debriefing time is called, report your results to the whole class. Do you think the other groups will agree with your conclusions?

Conclusion

Ideally, this exercise will provide you with a larger pool of ideas to work with as you develop your WebQuest-making skills. The best WebQuest is yet to be written. It might be yours!

Last updated on September 24, 2002


<http://webquest.sdsu.edu/webquestwebquest-hs.html>

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Appendix D

A Rubric for Evaluating WebQuests
A Rubric for Evaluating WebQuests

The WebQuest format can be applied to a variety of teaching situations. If you take advantage of all the possibilities inherent in the format, your students will have a rich and powerful experience. This rubric will help you pinpoint the ways in which your WebQuest isn't doing everything it could do. If a page seems to fall between categories, feel free to score it with in-between points.

<table>
<thead>
<tr>
<th></th>
<th>Beginning</th>
<th>Developing</th>
<th>Accomplished</th>
<th>Score</th>
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<tbody>
<tr>
<td><strong>Overall Aesthetics</strong></td>
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<td>and/or typographic</td>
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<td>overused and</td>
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<td>legibility suffers.</td>
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<td>Background interferes</td>
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<td>with the</td>
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<td>readability.</td>
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<td><strong>Navigation &amp; Flow</strong></td>
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<td>Getting through the</td>
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<td>lesson is confusing</td>
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<td>and unconventional.</td>
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<td>Pages can't be found</td>
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<td>easily and/or the</td>
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<td>way back isn't clear.</td>
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<td><strong>Mechanical Aspects</strong></td>
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<td>There are more than</td>
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<td>5 broken links,</td>
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| missing images, badly sized tables, misspellings and/or grammatical errors. | missing images, badly sized tables, misspellings and/or grammatical errors. | See Fine Points Checklist. |
## Introduction

<table>
<thead>
<tr>
<th>Motivational Effectiveness of Introduction</th>
<th>0 points</th>
<th>1 point</th>
<th>2 points</th>
</tr>
</thead>
<tbody>
<tr>
<td>The introduction is purely factual, with no appeal to relevance or social importance OR The scenario posed is transparently bogus and doesn't respect the media literacy of today's learners.</td>
<td></td>
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<table>
<thead>
<tr>
<th>Cognitive Effectiveness of the Introduction</th>
<th>0 points</th>
<th>1 point</th>
<th>2 points</th>
</tr>
</thead>
<tbody>
<tr>
<td>The introduction doesn't prepare the reader for what is to come, or build on what the learner already knows.</td>
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</tbody>
</table>

## Task (The task is the end result of student efforts... not the steps involved in getting there.)

<table>
<thead>
<tr>
<th>Cognitive Level of the Task</th>
<th>0 points</th>
<th>3 points</th>
<th>6 points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Task requires simply comprehending or retelling of information found on web pages and answering factual</td>
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</tbody>
</table>

<p>| Task is doable but is limited in its significance to students' lives. The task requires analysis of information and/or |          |         |         |
| Task is doable and engaging, and elicits thinking that goes beyond rote comprehension. The task requires synthesis of |          |         |         |
| questions. | putting together information from several sources. | multiple sources of information, and/or taking a position, and/or going beyond the data given and making a generalization or creative product. | See WebQuest Taskonomy. |</p>
<table>
<thead>
<tr>
<th><strong>Process</strong> (The process is the step-by-step description of how students will accomplish the task.)</th>
<th>0 points</th>
<th>2 points</th>
<th>4 points</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Clarity of Process</strong></td>
<td>Process is not clearly stated. Students would not know exactly what they were supposed to do just from reading this.</td>
<td>Some directions are given, but there is missing information. Students might be confused.</td>
<td>Every step is clearly stated. Most students would know exactly where they are at each step of the process and know what to do next.</td>
</tr>
<tr>
<td></td>
<td>0 points</td>
<td>3 points</td>
<td>6 points</td>
</tr>
<tr>
<td><strong>Scaffolding of Process</strong></td>
<td>The process lacks strategies and organizational tools needed for students to gain the knowledge needed to complete the task. Activities are of little significance to one another and/or to the accomplishment of the task.</td>
<td>Strategies and organizational tools embedded in the process are insufficient to ensure that all students will gain the knowledge needed to complete the task. Some of the activities do not relate specifically to the accomplishment of the task.</td>
<td>The process provides students coming in at different entry levels with strategies and organizational tools to access and gain the knowledge needed to complete the task. Activities are clearly related and designed to take the students from basic knowledge to higher level thinking. Checks for understanding are built in to assess whether students are getting it. See:</td>
</tr>
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<td></td>
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<td></td>
<td>• Process Guides</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• A Taxonomy</td>
</tr>
<tr>
<td>Richness of Process</td>
<td>0 points</td>
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<td>2 points</td>
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</tr>
<tr>
<td>Few steps, no separate roles assigned.</td>
<td>Some separate tasks or roles assigned. More complex activities required.</td>
<td>Different roles are assigned to help students understand different perspectives and/or share responsibility in accomplishing the task.</td>
<td></td>
</tr>
</tbody>
</table>

**Resources** (Note: you should evaluate all resources linked to the page, even if they are in sections other than the Process block. Also note that books, video and other off-line resources can and should be used where appropriate.)

<table>
<thead>
<tr>
<th>Relevance &amp; Quantity of Resources</th>
<th>0 points</th>
<th>2 points</th>
<th>4 points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resources provided are not sufficient for students to accomplish the task. OR There are too many resources for learners to look at in a reasonable time.</td>
<td>There is some connection between the resources and the information needed for students to accomplish the task. Some resources don’t add anything new.</td>
<td>There is a clear and meaningful connection between all the resources and the information needed for students to accomplish the task. Every resource carries its weight.</td>
<td></td>
</tr>
</tbody>
</table>
## Quality of Resources

<table>
<thead>
<tr>
<th>Points</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Links are mundane. They lead to information that could be found in a classroom encyclopedia.</td>
</tr>
<tr>
<td>2</td>
<td>Some links carry information not ordinarily found in a classroom.</td>
</tr>
<tr>
<td>4</td>
<td>Links make excellent use of the Web's timeliness and colorfulness. Varieties resources provide enough meaningful information for students to think deeply.</td>
</tr>
</tbody>
</table>

## Evaluation

<table>
<thead>
<tr>
<th>Points</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Criteria for success are not described.</td>
</tr>
<tr>
<td>3</td>
<td>Criteria for success are at least partially described.</td>
</tr>
<tr>
<td>6</td>
<td>Criteria for success are clearly stated in the form of a rubric. Criteria include qualitative as well as quantitative descriptors. The evaluation instrument clearly measures what students must know and be able to do to accomplish the task. See Creating a Rubric.</td>
</tr>
</tbody>
</table>

Total Score

---

Original WebQuest rubric by Bernie Dodge. This is Version 1.03. Modified by Laura Bellofatto, Nick Bohl, Mike Casey, Marsha Krill, and Bernie Dodge and last updated on June 19, 2001.

Appendix E

Time Travel to Ancient Greece WebQuests
Time Travel to Ancient Greece

developed by

5 Students at Western Michigan University

Introduction Task Process Research Evaluation Conclusion
Introduction

What would it have been like to wear togas, watch the original Olympic Games, or to eat grapes on the stone steps of the Parthenon? Odyssey Time Travel, Inc. (OTT), a company that has developed a time machine to travel back in time, wants to contract your company to design a travel guide for tourists interested in traveling back in time to Ancient Greece.

So, put on your creative thinking caps and get ready for a great time travel adventure to visit the ruins, the people, and the history of Ancient Greece!!

Introduction Task Process Research Evaluation Conclusion
Because of the overwhelming interest in Ancient Greece, Odyssey Time Travel, Inc. needs to contract a design team to produce an informative and eye-catching travel guide. You and three of your colleagues have the wonderful opportunity to design and present this travel guide to OTT, Inc. with the possibility that they will select your guide for publication and distribution. They want you to create a guide that will entice tourists to travel back through the time period from 2300 B.C. to 399 B.C. in Ancient Greece. The company requires that you include information about culture, daily life, geography, history, art and architecture. You will need to use the provided resources from the Internet to research and produce your travel guide. When your team has completed the travel guide, be prepared to give a presentation to OTT, Inc. Just remember that you are trying to convince OTT, Inc. to choose your guide. Be creative and have fun!

Introduction  Task  Process  Research  Evaluation  Conclusion
Process

Your design team will consist of four people that will work cooperatively to create the Ancient Greece travel guide. Each group member needs to choose one of the following roles (Remember that if there is difficulty in agreeing on roles, a mediator will have to choose the roles for each group member):

Roles

Historian: Your mission is to highlight the major events in Ancient Greek history to include as things to see while traveling. Think about what historical events would peak the interests of perspective tourists and excite their curiosity.

Geographer: Your job is to locate maps with major cities, rivers, and landmarks. Help perspective tourists travel around Ancient Greece with area highlights.

Cultural Anthropologist: Your task is to investigate the food, dress, entertainment, and religious traditions to give tourists a better idea of what life was like in Ancient Greece.
Art Historian: Your specialty is Greek Art and Architecture. Your job is to research important works of art and architecture to attract tourists to Ancient Greece.

Now that you have chosen which role you will take on in your group, you must begin your research, planning, and design.

**Research**

- Each member must include at least four pieces of interesting information to contribute to the travel guide.
- Use the provided Internet links to research your topic. Also, be sure to check OTT, Inc.'s specifications to know what they are looking for in a travel guide.

**Planning**

- Get together with your group and discuss your findings from your Internet searches.
• All group members should provide input from the research for the travel guide.

• You should also be thinking about how you want the guide to look and what you want to include in it.

• After talking with your group members, it is time to start writing your part in the guide. Each individual is responsible for one page in the guide, including text, pictures and advertisements.

• When finished writing, exchange your work with others in your group for peer editing.

Design

• Do a rough sketch of your design with your group to establish the layout.

• Use Microsoft Publisher to design your travel guide. Choose the templates for catalog and/or newsletter for assistance in your layout.

• Prepare to give a 10 minute presentation to pitch your group's travel guide to the representative of OTT, Inc. Remember that you are trying to convince OTT, Inc. to choose your guide.

| Introduction | Task Process | Research | Evaluation | Conclusion |

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Peer Editing Checklist

Use this list to check your paper carefully.

| My writing meets the requirements of the assignment. |
| I read the paper for meaning. | I checked the paper for complete sentences. |
| I used correct principles of grammar. | I used the spell check tool on the computer. |
| I double-checked for correct spelling. | All sentences start with a capital letter. |
| Proper nouns are capitalized. | The title has capital letters where needed. |
| Each sentence ends with proper punctuation. | Commas and quotation marks are used correctly. |
| I followed the procedures of the writing process. | I reread the paper carefully for all errors. |
Research

Use the following links to online resources to aid you in your research:

General Resources:

Timeline 2300-399 B.C.

Links to info on Greek myths

Pictures of Greece

Architecture, Religion, Daily Life, and Mythology

Story of Ancient Olympic Games

Ancient History Sources

Help with Publisher

History for Kids

Introduction Task Process Research Evaluation Conclusion
Evaluation

How well are you doing? Check the following rubrics while you are working on your travel guide to insure you are following OTT, Inc.'s criteria.

How well did you do? Fill out a self-evaluation rubric to turn in with your travel guide.

Self-evaluation Rubric

OTT, Inc Specifications (i.e. teacher evaluation rubric)

Introduction Task Process Research Evaluation Conclusion
### My Evaluation

**Name:**

**Group Name:**

<table>
<thead>
<tr>
<th></th>
<th>Beginning</th>
<th>Developing</th>
<th>Accomplished</th>
<th>Exemplary</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cooperation with group</strong></td>
<td>I was unable to work with my group to complete the travel guide.</td>
<td>I was able to work together with my group to complete the travel guide.</td>
<td>I worked with my group on the travel guide but did not share the responsibility of presenting</td>
<td>I worked with my group on the travel guide and shared the responsibility of presenting</td>
</tr>
<tr>
<td><strong>Completion of Travel Guide</strong></td>
<td>I am just beginning to understand the task. My role work is incomplete.</td>
<td>I was able to find some of the information needed to complete my role work.</td>
<td>I was able to find most of the information needed to complete my role work.</td>
<td>I was able to find all the information I needed to complete my role work.</td>
</tr>
<tr>
<td><strong>Research Information</strong></td>
<td>My research provides one piece of interesting information I found, as my role required.</td>
<td>My research provides two pieces of interesting information I found, as my role required.</td>
<td>My research provides three pieces of interesting information I found, as my role required.</td>
<td>My research provides four or more pieces of interesting information I found, as my role required.</td>
</tr>
<tr>
<td><strong>Overall visual</strong></td>
<td>Few or no graphic</td>
<td>Some graphic</td>
<td>Graphic</td>
<td>Appropriate</td>
</tr>
<tr>
<td>appeal</td>
<td>graphic elements. Graphics scarcely contribute to contribute to travel guide content. Type size, font, and/or color are not used well and consistently</td>
<td>elements contribute to travel guide content. Type size, font, and/or color need consistency and show some consistency.</td>
<td>elements and the majority contribute to travel guide content. Type size, font, and/or color are used functionally and show overall consistency.</td>
<td>and thematic graphic elements are used to make visual connections that contribute to the understanding of the travel guide content. Differences in type size, font, and/or color are used well and consistently</td>
</tr>
<tr>
<td>----------------</td>
<td>-------------------------------------------------</td>
<td>-------------------------------------------------</td>
<td>-------------------------------------------------</td>
<td>-------------------------------------------------</td>
</tr>
<tr>
<td>Mechanical Aspects</td>
<td>More than 10 grammatical and spelling errors.</td>
<td>5 to 10 grammatical and spelling errors</td>
<td>Less than 5 grammatical and spelling errors</td>
<td>No mechanical problems noted.</td>
</tr>
<tr>
<td>Travel Guide Presentation</td>
<td>I was unable to participate in the presentation.</td>
<td></td>
<td></td>
<td>I participated in the presentation and exhibited confidence in knowledge of the material presented.</td>
</tr>
<tr>
<td></td>
<td>Beginning 1</td>
<td>Developing 2</td>
<td>Accomplished 3</td>
<td>Exemplary 4</td>
</tr>
<tr>
<td>---------------------------</td>
<td>------------</td>
<td>--------------</td>
<td>----------------</td>
<td>-------------</td>
</tr>
<tr>
<td><strong>Cooperation with group</strong></td>
<td>Student was unable to work with group to complete the travel guide.</td>
<td>Student was able to work together with group to complete the travel guide.</td>
<td>Student worked with group on the travel guide but did not share the responsibility of presenting</td>
<td>Student worked with group on the travel guide and shared the responsibility of presenting</td>
</tr>
<tr>
<td><strong>Completion of Travel Guide</strong></td>
<td>Student was just beginning to understand the task. Role work is incomplete.</td>
<td>Student was able to find some of the information needed to complete role work.</td>
<td>Student was able to find most of the information needed to complete role work.</td>
<td>Student was able to find all the information needed to complete role work.</td>
</tr>
<tr>
<td><strong>Research Information</strong></td>
<td>Student's research provides one piece of interesting information as the role required.</td>
<td>Student's research provides two pieces of interesting information as the role required.</td>
<td>Student's research provides three pieces of interesting information as the role required.</td>
<td>Student's research provides four or more pieces of interesting information as the role required.</td>
</tr>
<tr>
<td><strong>Overall visual</strong></td>
<td>Few or no</td>
<td>Some graphic</td>
<td>Many graphic</td>
<td>Appropriate</td>
</tr>
<tr>
<td>Mechanical Aspects</td>
<td>Graphics Travel Guide Contents</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-------------------</td>
<td>--------------------------------</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Type size, consistency are not used well and consistently.</td>
<td>More than 10</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>More than 9</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than 9</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No mechanical errors.</td>
<td>Different in type size, font and/or color.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The student was unable to participate in the presentation, but showed some understanding of the material presented. However, there were grammatical and spelling errors noted. The font and/or color were not consistent. The travel guide contribute to the content. Type size, font and/or color are not consistent. The overall guide content contribute to the visual connections that contribute to the understanding of the travel guide.
Appendix F

"The Pearl" WebQuest

166
Introduction

The Pearl
By John Steinbeck

Introduction

For many centuries pearls have symbolized love, luck and prosperity. The Pearl, a novel by John Steinbeck, was adapted from an old folk tale about a great pearl. In the town of La Paz they tell the story of the great pearl. They tell how it was found and how it was lost again. They tell of Kino, the fisherman, his wife, Juana, and of their baby, Coyotito. When Kino finds the pearl he and his wife believe that it is the ticket to their son's future. He and Juana soon learn that the pearl only brings evil as it engulfs their lives in darkness and misery. After reading the novel you will bring a scene to life and enact it for your classmates!

Task

Process

Resources

Evaluation

Conclusion

This WebQuest was created by 4 students at Western Michigan University

Date Last Modified: December 5, 2002
Task

Introduction
Now for the fun part...your task! Your group will need to choose a scene from the novel, The Pearl by John Steinbeck, and perform it. The scene you choose will need to fill 10 minutes of final theater performance time. To complete this task your group will need to:

1. Meet and decide which scene you will perform.

Process
2. Decide what role each group member will take. Read through your role description and look at your resources for information.

3. Look at the grading rubric so you will know what you will be graded on.

Resources
4. Set times for at least 2 group meetings to share your findings and ideas.

Evaluation
5. Fill out the cooperative contract so that each group member has a clear idea of due dates and meeting times.

Conclusion
6. Practice, practice, practice! You should run through your play as many times as possible before the final performance. Remember to focus on:
   - Facing the audience
   - Using body language and facial expressions
   - Speaking slowly, loudly and clearly

7. Perform! You will be performing your play in front of an audience of students and teachers. Your group grade will be based on this final performance. Remember to have fun and enjoy your time in the spotlight!
Here are four scenes from the book that could be turned into dialogue for this assignment!

You may choose from these or choose one of your own.

Scene One: The baby gets bit by a scorpion

Kino awakes and watches the hanging box where his infant son, Coyotito, sleeps. He then watches his wife, Juana, who has also awakened and rests peacefully. Kino thinks of the Song of the Family, a traditional song of his ancestors, as the dawn comes and Juana begins to prepare breakfast. Kino's ancestors had been great makers of songs, and everything they saw or thought had become a song. Juana sings softly to Coyotito part of the family song. Kino looks at them and thinks that "this is safety, this is warmth, this is the Whole." Kino sees a movement near the hanging box where Coyotito sleeps. A scorpion moves slowly down the rope supporting the box. Kino thinks of the Song of Evil, the music of the enemy, as the Song of the Family cries plaintively. Kino stands still, ready to grasp the scorpion, but Coyotito shakes the rope and the scorpion falls on him. Kino reaches to catch it, but it falls onto the baby's shoulder and strikes. Kino grabs the scorpion and kills it as Coyotito screams in pain. Juana begins to suck the puncture to remove the poison. Having heard the baby's screams, Kino's brother, Juan Tomas, and his fat wife Apolonia enter with their children. Juana orders them to find a doctor. The doctor never comes to their cluster of brush houses, so Juana decides to go to the doctor herself. The event becomes a neighborhood affair, for Juan Tomas and Apolonia accompany them and even the beggars in front of the church follow Juana as she marches toward the doctor. Kino feels weak as he approaches the doctor's home, for the doctor is not of his race and thus believes that Kino's people are simple animals. Kino tells the doctor's servant that a scorpion poisoned his child. The doctor is a fat man who longs for civilized living. Although the doctor is at home, he refuses to treat Coyotito unless he knows that he has money. The servant asks if Kino has money, and when he can only offer small seed pearls, the servant tells Kino that the doctor has gone out. Kino strikes the gate with his fist, splitting his knuckles.

Scene Two: The poor fisherman finds a giant prize pearl

Kino and Juana walk slowly down the beach to Kino's canoe, the one thing of value that he owns. The canoe is old, bought by Kino's grandfather, and is the source of food for Kino. It is their most important possession, for "a man with a boat can guarantee a woman that she will eat something." Coyotito still suffers from the scorpion bite: the swelling on his shoulder continues up his neck and his face is puffed and feverish. Juana makes a poultice from brown seaweed. This poultice is "as good a remedy as any and probably better than the doctor could have done." Kino and Juana get into the canoe so that Kino can find pearl oysters that may pay for the treatment for Coyotito. Kino dives for pearl oysters, where he thinks of the Song of the Pearl That Might Be and the Song of the Undersea. Kino works steadily under the water until he sees a large oyster lying by itself with its shell partly open, revealing what seems to be a massive pearl. Kino forces the oyster loose and holds it tightly against him. When Kino comes up for air, Juana can sense his excitement. Kino opens the various oysters he had caught, leaving the largest one for last. He worries that the large pearl he saw was merely a reflection, for "in this
Gulf of uncertain light there were more illusions than realities." Finally, Kino opens the 170 oyster to see a rich, perfectly curved pearl. Juana lifts the poultice of seaweed from Coyotito to see that the swelling has begun to recede. Kino puts back his head and howls, causing the men in other canoes to look up and race toward Kino's canoe.

Scene Three: A great treasure brings greed and deception

The news of the pearl travels fast through Kino's small village. Before Kino and Juana return home, the news had already spread that Kino had found "The Pearl of the World," as it comes to be known. The local priest learns, as well as the doctor who refused to treat Coyotito. When the doctor learns, he tells the patient that he is treating that he must treat Coyotito for a scorpion sting. All manner of people grow interested in Kino, and the news stirs up something infinitely black and evil. The pearl buyers consider how they might deal with Kino and offer him the lowest possible price. However, Kino and Juana do not know the anger and bitterness they have engendered. Juan Tomas asks Kino what he will do now that he has become rich, and Kino answers that he and Juana will be married in the church. Kino envisions how he will be dressed, and sees Coyotito in a yachting cap and sailor suit from the United States. Kino then imagines buying a rifle. Thinking of the rifle breaks down barriers for Kino, as he imagines the whole lot of things that he might have. He thinks that Coyotito will go to school and learn to read. He claims that "my son will make numbers, and these things will make us free because he will knowâ€‘he will know and through him we will know." The priest visits Kino and Juana, and tells them that they hope that they will remember to give thanks and to pray for guidance. The doctor also visits, and although Kino tells him that Coyotito is nearly well, the doctor claims that the scorpion sting has a curious effect that comes later and if he is not treated he may suffer blindness or a withered leg. Not sure whether or not the doctor is telling the truth, Kino nevertheless lets him see the baby. The doctor takes a bottle of white powder and a gelatin capsule, and gives Coyotito a pill. The doctor tells them that the medicine may save the baby from pain, but he will come back in an hour to check on him. After the doctor leaves, Kino wraps the pearl in a rag and digs a hole in the dirt floor where he conceal the pearl. When the doctor returns, he gives Coyotito water with ammonia and tells Kino that the baby will get well now. Kino tells the doctor that he will pay him once he has sold his pearl. The neighbors tell the doctor that Kino has found the Pearl of the World and will be a rich man. The doctor suggests that Kino keep the pearl in his safe, but Kino says that he has it secure. The doctor realizes that Kino will likely look to the place where it is stored, and sees his eyes move to the corner where he had buried it. After the doctor leaves again, Juana asks Kino whom he fears, and he answers "everyone." That night, Kino thinks that he hears noises in his hut. He grabs his knife and strikes out in the dark. The person scurries out. Juana tells Kino that the pearl is evil and will destroy them. She tells him to throw it away or break it, for it will destroy them. Kino says that the pearl is their one chance, and that the next morning they will sell the pearl.

Scene Four: The family tragedy
As Kino and Juana travel northward, Kino feels a sense of exhilaration along with his fear. They walk all night and rest during the day so that they may not be found, and attempt to cover their tracks so that they cannot be followed easily. Kino warns Juana that "whoever finds us will take the pearl," but Juana wonders whether the dealers were right and the pearl has no value. Kino says that they would not have tried to steal it if it were not valuable. Kino repeats what they will have once they sell the pearl: the church wedding, the rifle, and education for Coyotito. When they stop to rest during the day, Juana does not sleep and Kino stirs as he dreams. When they hear noises from the distance, Kino orders Juana to keep Coyotito quiet. While Juana hides, Kino moves through the brush to see what he heard, and notices in the distance three bighorn sheep trackers, one of whom is on horseback. Kino realizes that if the trackers find them, he must leap for the horseman, kill him and take his rifle. As the horseman passes by Kino, he does not notice him. Kino and Juana both realize that if the trackers find them, they will kill them to get the pearl. Kino and Juana escape into the mountains, not bothering to cover their tracks. Kino orders Juana and Coyotito to leave him, for he can go faster alone, but she staunchly refuses. Kino and Juana take a zigzag path in order to thwart the trackers, and eventually find a small stream and the entrance to a cave. Kino tells Juana to hide in the cave, and he fears that Coyotito will cry, alerting the trackers. While hiding in the cave, Kino finds that the trackers are by the stream. So that he will not be seen, Kino takes off his white clothing and stealthily creeps near them as they rest. The trackers can hear Coyotito, but think that it is merely a coyote pup. As the tracker prepares to shoot what he thinks is a coyote, Kino approaches the trackers and pounces on them. He grabs one of the trackers' rifle and shoots him between the eyes, and stabs another with his knife. The third tracker escapes up the cliff toward the cave, but Kino shoots him. Kino stands silently and hears nothing but the cry of death. Coyotito has been shot. Kino and Juana arrive back in La Paz; he carries a gun while she carries her shawl with a limp, heavy bundle. Their return to La Paz becomes a notable event: "there may be some old ones who saw it, but those whose fathers and whose grandfathers told it to them remember it nevertheless. It is an event that happened to everyone." Juana appears hardened and tight with fatigue. Kino thinks of the Song of the Family, which has become his battle cry. As they return to La Paz, nobody speaks to them and even Juan Tomas cannot bear to say a word. Kino and Juana approach the gulf, and in the surface of the pearl Kino remembers seeing Coyotito lying in the cave with his head shot away. Kino throws the pearl into the ocean.
# Theatre Production: The Pearl

<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creativity</td>
<td>The play contains many creative details and/or descriptions that contribute to the audience's enjoyment.</td>
<td>The play contains some creative details and/or descriptions that contribute to the audience's enjoyment.</td>
<td>The play contains few creative details and/or descriptions that contribute to the audience's enjoyment.</td>
<td>There is little evidence of creativity in the play.</td>
</tr>
<tr>
<td>Organization</td>
<td>The play is very well organized. One idea or scene follows another in a logical sequence with clear transitions.</td>
<td>The play is pretty well organized. One idea or scene may seem out of place. Clear transitions are used.</td>
<td>The play is a little hard to follow. The transitions are sometimes not clear.</td>
<td>Ideas and scenes seem to be randomly arranged.</td>
</tr>
<tr>
<td>Requirements</td>
<td>All of the written requirements were met.</td>
<td>Almost all (about 90%) the written requirements were met.</td>
<td>Most (about 75%) of the written requirements were met, but several were not.</td>
<td>Many requirements were not met.</td>
</tr>
<tr>
<td>Dialogue</td>
<td>There is an appropriate amount of dialogue to bring the characters to life.</td>
<td>There is enough dialogue in this play, but it is not effective.</td>
<td>There is not quite enough dialogue to bring the character to life for the audience.</td>
<td>The dialogue is random and doesn't give the audience a good idea of character.</td>
</tr>
<tr>
<td>Working with Others</td>
<td>Student was an engaged partner, listening to suggestions of others and working cooperatively throughout lesson.</td>
<td>Student was an engaged partner but had trouble listening to others and/or working cooperatively.</td>
<td>Student cooperated with others, but needed prompting to stay on-task.</td>
<td>Student did not work effectively with others.</td>
</tr>
<tr>
<td>Neatness and Organization</td>
<td>The written work is presented in a neat, clear, organized fashion that is easy to read.</td>
<td>The written work is presented in a neat and organized fashion that is usually easy to read.</td>
<td>The written work is presented in an organized fashion but may be hard to read at times.</td>
<td>The written work appears sloppy and unorganized. It is hard to know what information goes together.</td>
</tr>
</tbody>
</table>
Cooperative Contract

This sheet will need to be completed by each group member and turned in on the day of your performance.

Producer:
Name ________________________________

Script with Blocking: Due Date ______________

Role Worksheet: Due Date: ____________________

Costume Designer:
Name ________________________________

Costume Sheet: Due Date: ____________________

Character Descriptions: Due Date: ____________________

Role Worksheet: Due Date: ____________________

Set Designer:
Name ________________________________

Proposal for Props and Set Materials: Due Date: ____________________

Role Worksheet: Due Date: ____________________

Lighting Technician:
Name ________________________________

Persuasive Argument: Due Date: ____________________

Role Worksheet: Due Date: ____________________

Cooperative Group Conferences: (minimum of two throughout the process)
Team Conference #1: Date: ____________________

Team Conference #2: Date: ____________________

Signatures of Team Members:

x ________________________________  x ________________________________

x ________________________________  x ________________________________

x ________________________________  x ________________________________
Process

Role #1
Producer
You are in charge of writing the script. This means converting the text of the scene chosen by the group into dialogue. Make sure you include blocking for each character if needed. Additional characters may be created if desired. Be creative! Here are some resources you can use to help you:

http://www.vcu.edu/artweb/playwriting/voice.html
http://www.vcu.edu/artweb/playwriting/formatnumbers.html
http://www.vcu.edu/artweb/playwriting/formatpage.html
http://www.vcu.edu/artweb/playwriting/sd.html

Resources

Role #2
Costume Designer
You will be responsible for designing and making/acquiring all of the costumes for the final performance. Remember to keep it simple and use resources that are readily available to you. See your instructor for availability of funds. You may also want to contact the drama department for available resources. You will need to work with the actors in order to get measurements, fit the costumes, and make any adjustments necessary. You will need to complete the costume sheet for every character in the play. You are also responsible for writing a character description for each character (age, mannerisms, etc.). These are the things that you will need to complete:

1. Costume sheet for each character.
2. Character descriptions for each character.
3. Costumes for each character.

Here are a few resources to help you:

http://alpha.furman.edu/~kgossman/tha42/tutor6.html
http://alpha.furman.edu/~kgossman/tha42/tutor7.html
http://www.costumes.org/pages/muchado3.htm

Evaluation

Please fill out your role sheet as you find useful information. Include at least 3 items and turn this sheet in with your script.

Conclusion
Please fill out your role sheet as you find useful information. Include at least 3 items and turn this sheet in with your costume sheets and character descriptions.

**Role #3**

**Set Designer**

Set and props make the production real. You want the audience to forget that this is a play. You want them to believe it—so make the set and props as realistic and interesting as possible. These should be things that you can bring from home or make and bring in. It would be a good idea to work closely with the producer to make sure that the props work well with the script. You will need to visit these sites for information and inspiration and write up a proposal for set and prop design. This proposal should be presented to your group. Please include items needed, materials with instructions, and reasoning behind your ideas.

http://www.colby.edu/personal/j/jdervin/other/rules.html
http://www.stagecrew.fsworld.co.uk/
http://sarcasm.fanfic.org/accessories.html

Please fill out your role sheet as you find useful information. Include at least 3 items and turn this sheet in with your proposal.

**Role #4**

**Lighting Technician**

Lighten Up! Because this is just a scene from a book and not a full blown play, many students would be apt to put a minimal effort into the production. You on the other hand want this to be the play of a lifetime. You want to see your name in lights! Speaking of lights, your job is to convince your drama partners that lighting is very important. You will research stage lighting and come back to your group with a convincing argument that states why lighting is so important. Don't forget to include a little background on lighting, like how it was first used and what the important principles of
lighting are. This should be approximately 2 pages in length.

Remember...Be CONVINCING! Here are a few websites that you can look at to get you started.

http://www.mts.net/~william5/sld.htm
http://www.unm.edu/~tddesign/LA.html
http://www.mts.net/~william5/sld/sld-100.htm

Please fill out your role sheet as you find useful information. Include at least 3 items and turn this sheet in with your persuasive argument.
Role Chart

Use this space to gather and organize information from three different websites. Each team member must fill out his/her own form for this project. This page should be printed and reproduced as needed.

Name ____________________ Role ____________________

Website Information gathered. How you will use this info?
Costume Sheet

Name: ________________________________

Character Name: ________________________________

Costume Description: Include Extras/accessories (shoes, hats, tights, jewelry etc):

<table>
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<th>Costume pieces needed</th>
<th>Who will bring/get/make</th>
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Character Name: ________________________________

Costume Description: Include Extras/accessories (shoes, hats, tights, jewelry etc):

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Character Name: ________________________
Costume Description: Include Extras/accessories (shoes, hats, tights, jewelry etc):

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Character Description

The character description will have a list of each character in the play and a short description of each character. The description should deal with the personality, age and mannerisms of the character. You can address the character's clothing in a general way but you should not go into specific detail about costumes (this should be detailed on the costume sheet).
Resources

The following is a recap of all of the websites needed to fulfill each role.

Role #1 - Producer

http://www.vcu.edu/artweb/playwriting/voice.html
http://www.vcu.edu/artweb/playwriting/formatnumbers.html
http://www.vcu.edu/artweb/playwriting/formatpage.html
http://www.vcu.edu/artweb/playwriting/sd.html

Role #2 - Costume Designer

http://alpha.furman.edu/~kgossman/tha42/tutor6.html
http://alpha.furman.edu/~kgossman/tha42/tutor7.html
http://www.costumes.org/pages/muchado3.htm
http://www.costumes.org/pages/instruct2.htm

Role #3 - Set Designer

http://www.colby.edu/personal/jjdervin/other/rules.html
http://www.stagecrew.fsworld.co.uk/
http://sarcasm.fanfic.org/accessories.html

Role #4 - Lighting Technician

http://www.mts.net/~william5/sld.htm
http://www.unm.edu/~tddesign/LA.html
http://www.mts.net/~william5/sld/sld-100.htm
Your Webquest will be worth 100 points. 72 of those points will be for group work. Your group will be evaluated using a rubric. Each item will be multiplied by 3. The other 28 points will come from a peer evaluation form that each group member must fill out and turn in the day of the final performance.
Peer Evaluation

Peer Evaluation of: __________________ Role: __________________

Completed By: __________________

Please circle one.
Each category is worth 7 points for a total of 28.

This person met his/her deadlines:

strongly disagree 0  disagree 1  neutral 3  agree 5  strongly agree 7

This person contributed to the team effort:

strongly disagree 0  disagree 1  neutral 3  agree 5  strongly agree 7

This person had a positive attitude towards working with the team:

strongly disagree 0  disagree 1  neutral 3  agree 5  strongly agree 7

I would like to work with this person again:

strongly disagree 0  disagree 1  neutral 3  agree 5  strongly agree 7
Conclusion

By going through the processes of script writing, costume design, set design, lighting techniques, and production you will learn everything that is involved in presenting a play. It can be a lot of work but it will be extremely rewarding when your play is a success. As you have seen, each role is equally important because actors cannot make a great production alone. It takes the work of those behind the scenes also. Hopefully your experiences have not only been a learning endeavor, but have been fun as well. Congratulations!
Please fill this out as completely and descriptively as possible. The creators of the WebQuest you complete will need this information to make any necessary adjustments to their WebQuest. Be honest and helpful! And if you couldn’t guess, your explanations are most important. If needed, please use another sheet of paper.

1. Which part(s) of the WebQuest did you like? WHY?

2. Which part(s) of the WebQuest really “worked” for you? WHY?

3. Did you get “lost” anywhere in the WebQuest? If so, where? WHY?

4. Which part(s) of the WebQuest didn’t “work” for you? WHY?

5. Please give some suggestions for adding to or changing the WebQuest based on your answers to the above.

6. Were the resources (web links) you had to utilize helpful and easy to use to find the information you needed? If so, how? If not, why not?

7. What scaffolding could have been included to help you complete your task?

8. What general educational benefit(s) does the WebQuest have?

9. What writing skills or other Language Arts skills were used or practiced in this WebQuest?

10. How will this WebQuest benefit Language Arts students?
Appendix H

Preservice Teacher Technology Survey
Please answer the following questions as honestly as possible by putting a check in the appropriate box.
After questions where there is writing space, please list specific uses/assignments.

<table>
<thead>
<tr>
<th>Question</th>
<th>0 days</th>
<th>1-2 days</th>
<th>3-4 days</th>
<th>5-6 days</th>
<th>7 days</th>
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<tbody>
<tr>
<td>1. How many times a week do you use a word processing program? For what?</td>
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<td>2. How many times a week do you use a spreadsheet program? For what?</td>
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<td>3. How many times a week do you use e-mail? For what?</td>
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<td>4. How many times a week do you surf the web? For what one main purpose?</td>
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<td>5. How many times a week do you use a computer for something other than the above? For what other purposes?</td>
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<td>6. How many times a week might you have students using a word processing program? For what?</td>
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<td>7. How many times a week might you have students using e-mail? For what?</td>
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<tr>
<td>8. How many times a week might you have students surfing the web? For what one main purpose?</td>
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<tr>
<td>9. How many times a week might you have students using the web for something else? For what other purposes?</td>
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</table>
10. If you have a webpage, how many times a week might you have students access your page? For what?

| Use the scale of 1-5 with 5 being the most comfortable & 1 being the least comfortable. |
|---|---|---|---|---|---|
| 1. How comfortable do you feel using a word processing program? |
| 2. How comfortable do you feel using e-mail? |
| 3. How comfortable do you feel surfing the web? Why? |
| 4. In general, how comfortable do you feel using a computer? Why? | 1 | 2 | 3 | 4 | 5 |
Appendix I

Human Subjects Institutional Review Documents
Date: April 17, 2002

To: Allen Webb, Principal Investigator  
Melinda Dobson, Student Investigator for dissertation

From: Mary Lagerwey, Chair

Re: HSIRB Project Number 02-04-03

This letter will serve as confirmation that your research project entitled "Practical Applications of the WebQuest" has been approved under the exempt category of review by the Human Subjects Institutional Review Board. The conditions and duration of this approval are specified in the Policies of Western Michigan University. You may now begin to implement the research as described in the application.

Please note that you may only conduct this research exactly in the form it was approved. You must seek specific board approval for any changes in this project. You must also seek reapproval if the project extends beyond the termination date noted below. In addition if there are any unanticipated adverse reactions or unanticipated events associated with the conduct of this research, you should immediately suspend the project and contact the Chair of the HSIRB for consultation.

The Board wishes you success in the pursuit of your research goals.

Approval Termination: April 17, 2003
You have been invited to participate in a research project entitled “Practical Applications of the WebQuest.” This research is intended to study the topic of the WebQuest, "an inquiry-oriented activity in which most or all of the information used by learners is drawn from the Web. WebQuests are designed to use learners' time well, to focus on using information rather than looking for it, and to support learners' thinking at the levels of analysis, synthesis and evaluation" (Dodge http://www.webquest.sdsu.edu). My study will focus on the development and use of WebQuests by pre-intern teachers. What are pre-intern teachers' initial and final reactions to Internet learning? I will also follow their progress into their intern teaching, looking at difficulties, both technical and pedagogical, that inhibit the use of the WebQuest. Will future teachers who have been taught how to develop WebQuests and why they are valuable to student learning utilize them in their own teaching? The dissertation will cover such topics as constructivist theory, collaborative and cooperative learning, and technology learning theory. This project is Melinda Dobson's dissertation project.

The duration of your involvement would be late April 2002 and Fall 2002 if you are intern teaching in the fall, and you agree to talk with me for an interview during that intern teaching. No one is required to keep in contact with me after the termination of Winter 2002 semester.

You will be asked, in the natural course of our class, to develop a WebQuest. After the WebQuest you will be asked to complete a questionnaire that addresses your comfort level with the Internet and your uses of the Internet. Survey responses may be used as research data. In addition, Confer items may be posted in relation to the WebQuest. You may choose to respond to those items or you may ignore those items. Responses to Confer items may be used as research data. If you intern teach in Fall 2002, I will ask for anyone who might be willing to let me interview them to keep in contact with me via e-mail or telephone. Your interview responses may be used as research data.

As in all research, there may be unforeseen risks to the participant. If an accidental injury occurs, appropriate emergency measures will be taken; however, no compensation or treatment will be made available to you except as otherwise specified in this consent form.
One way in which you may benefit from this activity is learning about methods for using technology in your future classrooms. Others who want to use technology in their classrooms may benefit from the knowledge that is gained from this research.

All of the information collected from you is confidential. That means that your name will not appear on any papers on which this information is recorded. The forms will all be coded, and Melinda Dobson will keep a separate master list with the names of participants and the corresponding code numbers. Once the data are collected and analyzed, the master list will be destroyed. All other forms will be retained for at least three years in a locked file in Allen Webb’s office. In addition, neither your name nor any other identifying information will appear in any write-ups of the study.

You may refuse to participate or quit at any time during the study without prejudice or penalty. If you have any questions or concerns about this study, you may contact Allen Webb at 387-2596 or Melinda Dobson at 329-2683. You may also contact the chair of Human Subjects Institutional Review Board at 387-8293 or the vice president for research at 387-8298 with any concerns that you have.

This consent document has been approved for use for one year by the Human Subjects Institutional Review Board as indicated by the stamped date and signature of the board chair in the upper right corner. Subjects should not sign this document if the corner does not have a stamped date and signature.

Your signature below indicates that you have read and/or had explained to you the purpose and requirements of the study and that you agree to participate.

________________________________________  _________________
Signature                                      Date

Consent obtained by:

________________________________________  _________________
initials of researcher                          Date
Date: December 4, 2002

To: Allen Webb, Principal Investigator
Melinda Dobson, Student Investigator for dissertation

From: Mary Lagerwey, Chair

Re: HSIRB Project Number: 02-04-03

This letter will serve as confirmation that the changes to your research project “Practical Applications of the WebQuest” requested in your memo received on December 2, 2002 have been approved by the Human Subjects Institutional Review Board.

The conditions and the duration of this approval are specified in the Policies of Western Michigan University.

Please note that you may only conduct this research exactly in the form it was approved. You must seek specific board approval for any changes in this project. You must also seek reapproval if the project extends beyond the termination date noted below. In addition if there are any unanticipated adverse reactions or unanticipated events associated with the conduct of this research, you should immediately suspend the project and contact the Chair of the HSIRB for consultation.

The Board wishes you success in the pursuit of your research goals.

Approval Termination: April 17, 2003
You have been invited to participate in a research project entitled “Practical Applications of the WebQuest.” This research is intended to study the topic of the WebQuest, “an inquiry-oriented activity in which most or all of the information used by learners is drawn from the Web. WebQuests are designed to use learners' time well, to focus on using information rather than looking for it, and to support learners' thinking at the levels of analysis, synthesis and evaluation” (Dodge http://www.webquest.sdsu.edu). My study will focus on the development and use of WebQuests by pre-intern teachers and current teachers who already use WebQuests in their classrooms. What are pre-intern teachers’ initial and final reactions to Internet learning? How and why do existing teachers utilize WebQuests? I will also follow my students’ progress into their intern teaching, looking at difficulties, both technical and pedagogical, that inhibit the use of the WebQuest. Will future teachers who have been taught how to develop WebQuests and why they are valuable to student learning utilize them in their own teaching? The dissertation will cover such topics as constructivist theory, collaborative and cooperative learning, and technology learning theory. This project is Melinda Dobson’s dissertation project.

The duration of your involvement would be after the close of the semester in my class through April 2003. If you are intern teaching soon after completing my class, I may email you to if you would agree to talk with me for an interview during or after that intern teaching. No one is required to keep in contact with me after the termination of Winter 2002 semester.

You will be asked, in the natural course of our class, to develop a WebQuest. After the WebQuest you will be asked to complete a questionnaire that addresses your comfort level with the Internet and your uses of the Internet. Survey responses may be used as research data. In addition, Confer items may be posted in relation to the WebQuest. You may choose to respond to those items or you may ignore those items. Responses to Confer items may be used as research data. If you intern teach after completing my class, I will ask for anyone who might be willing to let me interview them to keep in contact with me via e-mail or telephone. Your interview responses may be used as research data.
One way in which you may benefit from this activity is learning about methods for using technology in your future classrooms. Others who want to use technology in their classrooms may benefit from the knowledge that is gained from this research.

All of the information collected from you is confidential. That means that your name will not appear on any papers on which this information is recorded. The forms will all be coded, and Melinda Dobson will keep a separate master list with the names of participants and the corresponding code numbers. Once the data are collected and analyzed, the master list will be destroyed. All other forms will be retained for at least three years in a locked file in Allen Webb's office. In addition, neither your name nor any other identifying information will appear in any write-ups of the study.

You may refuse to participate or quit at any time during the study without prejudice or penalty. If you have any questions or concerns about this study, you may contact Allen Webb at 387-2596 or Melinda Dobson at 329-2683. You may also contact the chair of Human Subjects Institutional Review Board at 387-8293 or the vice president for research at 387-8298 with any concerns that you have.

This consent document has been approved for use for one year by the Human Subjects Institutional Review Board as indicated by the stamped date and signature of the board chair in the upper right corner. Do not participate if the stamped is more than one year old.

Your signature below indicates that you have read and/or had explained to you the purpose and requirements of the study and that you agree to participate.

________________________________________________________________________
Signature Date

Consent obtained by: ________________ ________________
initials of researcher Date

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Western Michigan University
Department of English
Principal Investigator: Allen Webb
Student Investigator: Melinda Dobson

You have been invited to participate in a research project entitled "Practical Applications of the WebQuest." This research is intended to study the topic of the WebQuest, "an inquiry-oriented activity in which most or all of the information used by learners is drawn from the Web. WebQuests are designed to use learners' time well, to focus on using information rather than looking for it, and to support learners' thinking at the levels of analysis, synthesis and evaluation" (Dodge http://www.webquest.sdsu.edu). My study will focus on the development and use of WebQuests by pre-intern teachers and current teachers who already use WebQuests in their classrooms. What are pre-intern teachers' initial and final reactions to Internet learning? How and why do existing teachers utilize WebQuests? I will also follow my students' progress into their intern teaching, looking at difficulties, both technical and pedagogical, that inhibit the use of the WebQuest. Will future teachers who have been taught how to develop WebQuests and why they are valuable to student learning utilize them in their own teaching? The dissertation will cover such topics as constructivist theory, collaborative and cooperative learning, and technology learning theory. This project is Melinda Dobson's dissertation project.

The duration of your involvement if you choose to complete the survey would be late December 2002 until April 2003. No one is required to fill out the survey or contact me in any way.

You will be asked to complete an anonymous online survey addressing your use of WebQuests. Survey responses may be used as research data.

One way in which you may benefit from completing the survey by receiving the results of this survey or any other information you request from me. All data from the survey would be willingly shared by Melinda Dobson with those who request the results.

All of the information collected from you is confidential. That means that your name will not appear on any papers on which survey information is recorded. Once the data are collected and analyzed, the master list will be destroyed. All other forms will be retained for at least three years in a locked file in Allen Webb's office. In addition, neither your name nor any other identifying information will appear in any write-ups of the study.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
You may refuse to participate or quit at any time during the study without prejudice or penalty. If you have any questions or concerns about this study, you may contact Allen Webb at 269-387-2596 or Melinda Dobson at 269-329-2572. You may also contact the chair of Human Subjects Institutional Review Board at 269-387-8293 or the vice president for research at 269-387-8298 with any concerns that you have.

This consent document has been approved for use for one year by the Human Subjects Institutional Review Board. Do not participate after April 17, 2003.

By selecting the “I accept” button at the end of this document, you are indicating that you have read and/or had explained to you the purpose and requirements of the study and that you agree to participate. You will be taken to the on-line survey. If you choose not to accept, you can close this window and not participate.