

## WEBQUESTS: A TOOL FOR ALL TEACHERS

By

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### ABSTRACT

*Classroom teachers are assuming more and more responsibility for meeting the needs of students from a larger number of diverse backgrounds and with increasingly diverse special needs. Many practicing teachers identify students with special needs as their greatest concern and challenge, but often one of their greatest rewards. One way of differentiating instruction to provide Universal Design for Learning (UDL) is through WebQuests.*

*WebQuests, inquiry oriented activities in which most of the information is drawn from the web, not only meet two requirements of the Individuals with Disabilities Education Act (IDEA), but also allow teachers the opportunity to provide multiple levels of assistance to all students. Specifically, WebQuests have the ability to not only provide accommodations for all students with special needs but they have the ability to provide all students with special needs access to the general education curriculum as well. When teachers become familiar with WebQuests and use them in their daily instruction with students, it is very likely that the educational opportunities and outcomes for all students will substantially increase.*

*Keywords: Special Needs, Individuals with Disabilities Education Act, Universal Design for Learning, Differentiated Instruction Technology.*

### INTRODUCTION

#### What We Know

Classroom teachers are assuming more and more responsibility for meeting the needs of students from a larger number of diverse backgrounds and with increasingly diverse special needs. Many practicing teachers identify students with special needs as their greatest concern and challenge, but often one of their greatest rewards. One way of differentiating instruction to provide Universal Design for Learning (UDL) is through WebQuests.

Educators are changing the learning environment so they can see students' readiness levels, learning profiles, needs, and interests more clearly. As classrooms become more culturally diverse, it becomes imperative that differentiated instruction occur during the early school years because today's classrooms usually contain students with a wide range of abilities and varied experiential backgrounds who learn at different rates and in different ways (Cox, 2008). WebQuests are a tool that meets the demands for differentiated instruction in a very clear and concise way.

On a simple level, differentiated instruction through

WebQuests is teaching with student variance in mind. It means starting where the students are rather than adopting a standardized approach to learning that seems to presume that all learners of a given age or grade are essentially alike. Thus, differentiated instruction through WebQuests is "responsive" teaching rather than "one size fits all" teaching. Each student brings his or her best to the lesson and is able to participate in class without watering down the content.

A fuller definition of differentiated instruction and in particular through WebQuests, is that teachers proactively plan varied approaches to what students need to learn, how they will learn it, and/or how they can express what they have learned in order to increase the likelihood that each student will learn as much as he or she can as efficiently as possible (Tomlinson, 2003). Teachers can address goals of the individualized education program (IEP) to focus on accommodations and modifications to support the student's success in the general curriculum (Goldberg, 1999). Teachers can also incorporate instructional support into the design of the WebQuest in the form of readability, larger text, and simpler directions. Also, because schools and teachers are required to

provide students with the opportunity to be involved in and progress within the general education curriculum, the WebQuest format offers the opportunity to incorporate basic skills with higher-order thinking skills and other enrichment activities with peers without disabilities (Kelly, 2000).

## Why Web Quests

A rationale for differentiated instruction through WebQuests comes from theory, research, and educational common sense. Specifically, today's classrooms are becoming more academically diverse in most regions of the United States (and elsewhere). Many if not most classroom contain students representing both genders and multiple cultures, frequently include students who do not speak English as a first language, and generally contain students with a range of exceptionalities and markedly different experiential backgrounds. These students almost certainly work at differing readiness levels, have varying interests, and learn in different ways. Considering today's diverse classrooms, it is unlikely that a teacher will be consistently able to develop "one size fits all" learning experiences that are in the zone of proximal development (optimum degree of difficulty for learning) of all students in a particular class unless they expand their thinking and approaches to classroom instruction.

However, it is not enough to declare that differentiated instruction is going to be the order of the day (Benjamin, 2006). Differentiated instruction is a practice that grows out of certain values that are important in the way that we treat our students, design our curricula, establish rules, and talk about learning. WebQuests are invaluable in the differentiated instruction process because they accomplish these very ideas through technology and as students continue to advance and strengthen their technology skills, it is imperative that teachers capitalize on these strengths during daily classroom instruction so that the educational opportunities and outcomes for all students will substantially increase.

The WebQuest is a teacher-created lesson plan in the form of a simple World Wide Web page with active, pre-selected Internet links and a specific purpose for students

(Kelly, 2000). Kelly further suggests that it is designed to provide students with an independent or small-group activity that incorporate research, problem-solving, and application of basic skills. The lessons which essentially provide guided research using the Internet, are generally created at no cost to teachers.

The logistics of how to use Webmall quests can be quite overwhelming. However, with careful planning and flexibility, they can be an invaluable tool for differentiating instruction to meet the needs of all students. In particular, classes could be divided into teams working on the same topic, but different or there could be one that focus for the whole class which each student having their own role.

## Webquests: Theory Driven

Dr. Berniew Dodge, professor of Educational Technology at San Diego State University, developed and named the concept of WebQuests while teaching a class for pre-service teachers in the spring of 1995. He wanted to give his student teachers a format for online lessons that would make the best use of student time while fostering higher-level thinking skills in all students. Soon after, Tom March (1998), working at Sand Diego as a fellow funded by Pacific Bell, developed the first fully developed WebQuest as a part of PacBell's Knowledge Network. They are based on constructivism (theory focused on students' acquisition of knowledge through discovery and evaluation of information and the formulation of their own meaning (Dede & Sprague, 1999) and stem from Universal Design for Learning (UDL- the generation of learning materials that are accessible to everyone). They also incorporate cooperative and collaborative learning. Essentially, WebQuests are tools, and not educational theories, so they can be used virtually in any classroom with appropriate computer access. They are inquiry-oriented activities in which most of the information is drawn from the web and are designed to use learners' time well, focus on using information rather than looking for it, and support learners' thinking at the levels of analysis, synthesis and evaluation (Dodge, 2001). Similarly, WebQuests allow teachers to provide multiple levels of assistance to all students by meeting two of the Individuals with Disabilities Education Act (IDEA) requirements which

include providing accommodations and providing access to the general education curriculum. Specifically, use scaffolding by breaking the task into meaningful chunks- a much needed practice for struggling students.

## Webquests: Practical Implications

WebQuests provide good instructional practice by:

- Providing structure and guidance for the students and teacher. Objectives, instructions and assessment criteria are explicitly stated.
- Focusing student attention on the provided resources, rather than having students search for them.
- Seamlessly integrating technology into the curriculum.
- Providing authentic tasks that motivates students to explore provided online information.
- Encouraging cooperative student activities and scaffolding that promotes critical thinking, creativity, and deeper understanding of the material.
- Providing rich opportunities for alternative assessment
- Providing a way to use the Internet in Education.
- Tapping into Theories of Multiple Intelligences

Similarly, WebQuests accommodate all students through the following:

- Aesthetics
  - Larger font size
  - Dark background with light text
  - More pictures
  - Reduced amounts of text
  - Appropriate reading levels
- Guided Notes
- Guided Research
- Use of Authentic Documents
- Cooperative Groups
- Multiple Means of Presenting Information
- Multiple Representations of Materials

Webquests use several strategies to increase student motivation. First, Webquests use a central question that

needs to be answered. Students are able to consider the question to be one that is real to them and not one that comes from the classroom teacher. Thus, they are likely to be motivated when they realize the end result of their work will satisfy their own curiosity and not one related to their classroom teacher. The reward becomes intrinsic. Secondly, Webquests use real, authentic resources and materials to work with- resources (computers) that are used by the students on a daily basis at home. When students use resources that they are familiar with and use frequently, they are motivated to continue the task because they feel confident and competent with the materials. Lastly, when each student takes on an individual role in a WebQuest, their team relies and depends on them for their expertise- this again is likely to cultivate motivation.

## Designing a WebQuest

There are at least two levels of WebQuests, short term WebQuests and longer term WebQuests that should be distinguished from one another. The instructional goal of a short term WebQuest is knowledge acquisition and integration, described as Dimension 2 in Marzano's (1992) Dimensions of Thinking Model. At the end of a short term WebQuest, a learner will have grappled with a significant amount of new information and made sense of it. A short term WebQuest is designed to be completed in one to three class periods. The instructional goal of a longer term WebQuest is what Marzano calls Dimension 3: extending and refining knowledge. After completing a longer term WebQuest, a learner would have analyzed a body of knowledge deeply, transformed in some way, and demonstrated an understanding of the material by creating something that others can respond to, on-line or off. A longer term WebQuest will typically take between one week and a month in a classroom setting.

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

- An Introduction
- A Task
- A Process
- Resources
- Evaluation
- Conclusion

The goal of the INTRODUCTION is to make the activity desirable and fun for students. When projects are related to student's interests, ideas, past experiences, or future goals, they are inherently more interesting. The goal of the motivational component is to engage and excite students at the beginning of each WebQuest.

An example includes the following:

*Your expertise is needed immediately! KW a young killer whale, has been transferred to Aqualand Marine Aquarium and is showing signs of distress. Aqualand has hired your team of experts to evaluate the conditions of KW's new home to determine which factors may be causing his symptoms. After analyzing the situation, the team will present a report based on their findings to the board of directors of Aqualand. The report will include recommendations which may help improve KW's condition (Richman).*

The TASK is a formal description of what students will have accomplished by the end of the WebQuest. First teachers find resources for a particular topic on the Web. Then, the teachers develops an activity for the students that incorporate the information from the various sites. This task should be able to do and interesting. Unfortunately, developing the task is the most difficult and creative aspect of creating a WebQuest. However, once a WebQuest is created, it will remain for future use of students. As a result, students can be asked to publish their findings on a Website, collaborate in an online research initiative with another class or school, or create a multimedia presentation on a particular aspect of their research. The task should be visually and aesthetically appealing, inherently important, and fun for the students.

The PROCESS is a description of the steps students should go through it in accomplishing the task, with links embedded in each step. During the process stage, the

teacher should suggest steps of discovery which include strategies for developing the task and descriptions of roles to be played or perspectives to be taken by each student. The RESOURCE section of the WebQuest consists of a list of the resources (bookmarked websites, print resources, etc.) that students will need to complete the task. It's important to remember that non-web resources can also be used. WebQuests are enhanced by materials that supplement online resources. These can include things like videos, audio cassettes, books, posters, maps, models, manipulatives, and sculptures. Team teaching, field trips, and other motivational techniques can also be used.

The EVALUATION section includes a rubric for evaluating students' work. The standards should be fair, clear, consistent, and specific to the tasks set. Many of the theories of assessment, standards, and constructivism apply to WebQuests: clear goals, matching assessments to specific tasks, and involving students in the process of evaluation are all concepts that apply to this section.

The CONCLUSION section provides an opportunity to summarize the experience, encourage reflection about the process and/or extend and generalize what was learned. Similarly, it provides students with a sense of closure and can often open a path into the next lesson.

WebQuests can be applied to a wide range of topics but the best use of the WebQuest format is for topics that are less well-defined- tasks that invite creativity and problems with several possible solutions. They can address open-ended questions that are similar to the example given in the introduction section but also may include suggestions such as

- What kinds of people were most likely to survive the sinking of the Titanic? Why?
- What should be done to protect the coral reefs?
- How do other democracies deal with social problems like crime, and what if anything can the United States learn from them?

### Final Thoughts

Finding the time is the biggest obstacle to designing WebQuests. The first attempt requires that the teacher

learn to use some new tools and some teachers simply believe that they cannot find enough spare hours to pull it off. The benefit, though, is that once the WebQuest is made, most of the work is done. Once that occurs, the teacher no longer has to worry about daily lesson plans or scintillating lectures. Relieved of the burden of being the main source of new information, the teacher instead works with students as a coach, thinking on his feet. Many teachers find that they like this role better than being the "sage on center stage". The WebQuest is not only a design, it is a device through which participation without frustration makes learning fun, exciting, and accessible to all students- which is just as it should be (Kelly, 2000).

When we think about it, tomorrow's workers and citizens are students sitting in our classrooms today and when predictions are made about life and work for the coming decades, there are few points on which there is nearly universal agreement:

- ? Tomorrow's workers will need to be able to work in teams
- ? Individuals will move through several careers in the course of a lifetime.
- ? The issues facing citizens will become more and more complex, and societal problems will resist easy fixes or black-and-white categorization.
- ? The amount of information available to everyone will grow at an accelerating pace; much of it will come directly from a growing number of sources without filtering or verification (The WebQuest Page).

What this means is that tomorrow's workers and citizens will need to be able to grapple with ambiguity. They will need to commit themselves to a lifelong process of learning, honoring multiple perspectives and evaluating information before acting on it. Using the differentiated instructional strategy of a WebQuest in classrooms is certain to help build a solid foundation that prepares

these students for this future.

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