(Web)Quest for Knowledge

Lana Williams

Sierra Nevada College

Abstract

Developed by Dodge and March, a **WebQuest** is an inquiry-based teaching tool. It requires students of all ages and levels to participate in a genuine task using an instructor’s pre-designed, pre-defined internet resources. It is possible that print resources can also be used, although it is unusual. Learners focus on assembling, summarizing, synthesizing, and evaluating the information within distinctly defined boundaries in order to accomplish the educational mission set by the instructor. Multiple studies have found that using WebQuests increase student effectiveness in the classroom by increasing interactivity and technology usage. WebQuests should be utilized more often by teachers and students in both mainstream and special education classrooms, and more research should be employed to provide evidence supporting this conclusion.

(Web)Quest for Knowledge

A WebQuest is an investigation-centered activity using various internet resources. Rather than simply asking students to research their content area by looking up topics and having to sift through irrelevant information a WebQuest allows for directed learning using a number of sites as sources of information. WebQuest are available for usage by everyone and anyone. WebQuests are a relatively new innovation in educational interactive technology.

Teachers all over the world have designed WebQuests for use on almost every subject. They are available for teachers everywhere and are usually free of charge. The hard work of designing an activity and finding suitable links is already completed and they can even be edited to suit any particular need. A WebQuest is similar to a scavenger hunt and it can be limited to pages within a particular WebQuest, or it can continue throughout the entire Web. Dr. Bernie Dodge and Tom March were the first to create a WebQuest.

According to these originators,

a real WebQuest is a scaffolded learning structure that uses links to essential resources on the World Wide Web and an authentic task to motivate students' investigation of an open-ended question, development of individual expertise, and participation in a group process that transforms newly acquired information into a more sophisticated understanding. (March, 2003, p. 42, para. 4)

There are many WebQuests which are not real WebQuests but rather a compilation of works thrown together. A PowerPoint uploaded onto a webpage does not a WebQuest make.

An authentic WebQuest makes a student access the web to complete a task or solve a problem and elicits higher-order thinking rather than simple information searching and recall. These tasks require problem solving, judgment, synthesis, and analysis of information—in other words, critical thinking skills. Perkins and McKnight (2005) explained one of the benefits in the following words: “In the process of problem solving, students learn skills in an interactive, involved manner rather than in isolation” (p. 124).

In order to develop students’ skills, WebQuests provide (Gubulhar, 2010, p.139) an authentic, technology-rich environment for problem solving. **WebQuests** involve problem-solving methods while guiding the learning processes and interactions (March, 2003). WebQuests are designed for breadth and width. By differentiating subject areas across age levels, young children and adults can learn the same content while making connections.

In teacher preparation **WebQuests** improved problem-solving skills, higher order thinking, motivation, creativity, critical thinking, active learning, connection to authentic contexts and assisted in bridging the theory to practice gap (Gubalhar, 2010). WebQuests are diverse, covering subject areas of Math, literacy, or science as well as Language Arts. Unfortunately, there are few research studies proving **WebQuests** enhance teaching and inquiry-based learning. Special education teachers can accommodate students with diverse learning needs by using WebQuests. This makes a **WebQuest** a useful tool for both special education teachers and mainstream teachers.

There is some evidence that **WebQuests aid** in teacher preparation and stronger desires for teachers to integrate more interactivity in teaching (Yang, Tzuo, & Komara, 2011). After experiencing **WebQuest** developed by the course instructor in teacher preparation program, teachers completed a questionnaire. Most of the teachers indicated that they preferred **WebQuest** activities over the traditional teacher-directed learning method. According to Yang, Tzuo, & Komara, teachers also learned about **WebQuest** as a Universal Design for Learning (UDL) tool for students with diverse learning needs (2011). UDL is a set of principles for [curriculum](http://www.udlcenter.org/aboutudl/udlcurriculum) development that give all individuals equal opportunities to learn (“National Center on Universal Design for Learning,” 2011). All participants in the survey found **WebQuest** helpful in accommodating individual differences and learning styles. Many of the teachers reflected that they used more critical thinking and problem solving skills during the **WebQuest** Teachers also felt that they had to use more creativity during the WebQuest activity. Teachers also indicated that not only did WebQuest activities require the usage of more technology but that by participating in the WebQuest activity it made them excited to incorporate more technology in their teaching methods in the future (Yang, Tzuo, & Komura, 2011).

The use of **WebQuest** can be a valuable tool to enrich the educational curriculum in special education (Kleemans, Segers, Droop, & Wentink, 2011, p. 801). Middle school students performed WebQuests on both well-defined and ill-defined assignments. It was expected that the students would retain less knowledge on the ill-defined WebQuest and more on the well-defined, as expected in a traditional teacher-led non-interactive method. However, students learned more on the ill-defined assignment.

According to Kleemans, Segers, Droop, & Wentink, these “results indicated that the learning gain…was higher for participants who worked on the ill-defined assignments” when using WebQuests (2011, p. 810). Students in special education often have problems defining the assignment, making it difficult for them to start work independently. This study provides evidence that using a WebQuest can provide a learning gain for students in special education that would not occur otherwise. WebQuests can help bypass the initial difficulty of assessing on what a student feels an assignment involves by allowing students to perform well within the assignments parameters independently.

Another study was conducted to develop a web-based interactive system named Web Macerasi. The study was developed for teaching, learning and evaluation purposes, and to investigate the potential consequences of using the system. In the first stage, a **WebQuest** site was designed as an interactive system in which various Internet and web technologies were used for infusion of technology into teaching and learning process (Gulbahar, Madran, Kalelioglu, 2010). According to Gulbahar, Madran, & Kalelioglu, “technology is used in education for two main reasons: as a tool for increasing the effectiveness of instruction and to integrate technology into the curriculum” (2010, p. 139).

By using the Web Macerasi WebQuest site it was evidenced that the students liked the technology-supported media, were more eager to work together, found the feedback they received beneficial, were able to delegate tasks effectively and fairly, and all agreed on the positive contribution for the scheduled assignment. The Web Macerasi site was established as successful and to have been employed successfully in light of its goals. This further supports the conclusion that WebQuests should be used more often in the classroom and more studies need to be done to provide confirmation in this area.

Despite some opinions to the contrary, studies substantiate that WebQuests are effective ways for students to teach themselves on how to complete an assignment as well as integrating the technology that provides them the means to do so. WebQuests are useful for teachers in preparation of lesson plans. WebQuests are also a great way for students to collaborate together and learn how to work in a team. WebQuests are valuable tools in special education and mainstream classrooms.

More research backing the advantages of using WebQuests should be completed. WebQuests teach a variety of necessary and prized skills; certain skills such as critical thinking, problem-solving, higher order thinking, motivation, creativity, engaged learning, piecing together genuine contexts and bridging the theory to practice gap. These learning of these invaluable skills often can be very costly. The price keeps increasing when using contracted teachers, lengthy and expensive training for teachers, and high-priced technological gadgets. However, a really good thing about WebQuests is that they are mostly entirely free of charge. Teachers, students, parents, administrators, counselors, therapists, and all those involved in education can access WebQuest resources.

WebQuests are a valuable resource that should be used more by educators. Today’s classroom requires the use of technology, but budgets have been decreasing due to the economic recession. WebQuests can help by providing interactive technology at zero cost. WebQuests can be utilized by teachers and students in both mainstream and special education classrooms. The quest for knowledge can be enriched and supplemented in a significant way by the use of a simple and fun WebQuest.

References

Gülbahar, Y., Madran, R., & Kalelioglu, F. (2010). Development and Evaluation of an Interactive WebQuest Environment: "Web Macerasi". *Journal Of Educational Technology & Society*, *13*(3), 139-150.

Kleemans, T., Segers, E., Droop, M., & Wentink, H. (2011). WebQuests in special primary education: Learning in a web-based environment. *British Journal Of Educational Technology*, *42*(5), 801-810. doi:10.1111/j.1467-8535.2010.01099.x

March, T. (2003). The learning power of WebQuests. *Educational Leadership: New Needs, New Curriculum, 61(*4*),* 42-47. Retrieved from <http://tommarch.com/writings/wq_power.php>

National Center on the Universal Design for Learning. (2011). In *About UDL: Learn the Basics* (What is UDL?). Retrieved from http://www.udlcenter.org/aboutudl/whatisudl

Perkins, R., & McKnight, M. L. (2005). Teachers’ attitudes toward WebQuests as a method of teaching. *Computers in the Schools, 22(*1*),* 123–133*.*

Yang, C., Tzuo, P., & Komara, C. (2011). Using WebQuest as a Universal Design for Learning Tool to Enhance Teaching and Learning in Teacher Preparation Programs. *Journal Of College Teaching & Learning*, *8*(3), 21-29.

Zheng, R. R., Perez, J. J., Williamson, J. J., & Flygare, J. J. (2008). WebQuests as perceived by teachers: implications for online teaching and learning. *Journal Of Computer Assisted Learning*, *24*(4), 295-304. doi:10.1111/j.1365-2729.2007.00261.x