Carvalho, Ana Amélia A. (org.) (2006). *Actas do Encontro sobre WebQuest*. Braga: CIEd.

WebQuests: Past, Present and Future

Bernie Dodge, Ph.D.
San Diego State University, San Diego, California, USA
bdodge@mail.sdsu.edu

The Past

The year 1995 seems like a century ago. The web was still new or unknown to most people. Universities were beginning to put course materials up online, but most K-12 schools were still years away from making substantive use of the web for teaching and learning.

Pedagogically, the uses of the web at all levels were primitive. Most educators, if they used the web at all, were using it to assign the same kind of research papers that were familiar to any 20th century student. Instead of a trip to the library, students were told to look things up with a search engine. Alternatively, some early web-based lessons were merely worksheets with URLs. Students were directed to read specific web pages and answer low-level questions.

This was the landscape I faced as I began to teach a new course to pre-service teachers in the spring of 1995. I had promised in the course description to provide ways of using the new medium of the web in ways that were accessible to any teacher, ways that would engage learners in higher level thinking skills. As the course began I had the chilling realization that I had no idea how to actually deliver on that promise.

Necessity was, as usual, the mother of invention. In a class session a few weeks into the semester, I had wanted to expose my students to a pedagogically advanced piece of software called Archaeotype which was a simulation of an archeological dig. The problem was that I didn't own a copy of the software and couldn't demonstrate it. Instead I arranged for my students to work in groups accessing different data sources about Archaeotype. One group interviewed via videoconference one of the program's designers at the Dalton School in New York City. Another group interviewed a teacher who had tried using the software at a working class school in California. Other groups had access to printed evaluation reports about the software and web pages describing its design and use.

The overarching task for my students was to determine whether Archaeotype, which was developed for use by well prepared students at an expensive private school in New York, could be implemented at the economically deprived, culturally diverse school in San Diego at which they were doing their student teaching. That task organized all of their thinking and interactions

with each other and required them both to synthesize their understanding of the design of Archaeotype and to develop an informed judgment about whether it could be used in a very different setting.

The Archaeotype lesson lasted less than two hours, and in that time my students acquired a far deeper understanding of the content than if I had done the usual lecture, demonstration and discussion. It seems obvious in retrospect, but in this lesson I saw how powerful active learning can be when it is structured appropriately.

Reflecting on the exercise later, I realized that by accident I had come upon a structure that could be used to teach just about anything. That was the genesis of the WebQuest model.

Evolution

Within a few months after the first WebQuest, I had written a paper in which I gave that lesson format a name, clarified its definition, and suggested critical attributes for the concept. The most important of those critical attributes was that a WebQuest had to engage higher level thinking, and that turned out to be the most difficult to attain.

I established the WebQuest Page at http://webquest.sdsu.edu and posted examples, training materials and templates, and within a few months I began to receive emails from others around the world sharing the URLs of their own WebQuests. By the end of 1995 I had a database of a hundred or so WebQuests created elsewhere and that number grew into mulbiple hundreds over the two years after that.

At first I was gratified that so many people found the idea useful, but over time I could see a disturbing trend: a majority of the WebQuests educators were creating were not what I originally had in mind. Though they followed the format of Introduction, Task, Process, and Evaluation, they were focused on low-level factual recall. Instead of a task that called for analysis, synthesis, evaluation, judgment, problem solving or creativity, about 80% of the new WebQuests asked learners read web pages and find the answers to simple questions for which there was only one right answer. This, I knew, was preparation for the 19th century, not the 21st.

Over the period of 1998 through 2002, I developed several conceptual tools to address this problems. First was the Taskonomy, a taxonomy of WebQuest tasks. By analyzing the existing body of WebQuests, I was able to categorize tasks into twelve types, eleven of which required higher level thinking. The twelfth type, Retelling, was the most common and was to be avoided. By giving a name to these low-level non-WebQuests, I had begun to develop a language for describing good WebQuests. This, I've learned from experience, is critical for those who want a new idea to keep its integrity as it spreads.

The next strategy that I developed to improve the ability of others to created solid WebQuests was to apply the concept of design patterns to them. Design patterns is a concept that originated in the field of architecture and then spread to software development where it was

widely adopted. The idea is to create descriptions of successful solutions that can be applied to a wide range of situations. It was clear, for example, that a WebQuest that asked learners to design a travel itinerary in a given place could be used to learn about any geographical location. The overall structure would be constant, and simply by changing the links provided, one could create any number of WebQuests. By analyzing high quality WebQuests, I was able to develop a list of 20 design patterns, each with its own template and prompts to assist the WebQuest author.

As the taskonomy and design pattern ideas became widely known, the overall quality of new WebQuests being created began to rise. There was, though, a problem that was obvious in 1995 that persisted in the years after that: WebQuest creation took too much time. How could I speed up the process of creation?

In the fall of 2005 I released QuestGarden, my attempt to solve that problem. QuestGarden is an online authoring tool that guides teachers step by step through the process of creating a new WebQuest. It incorporates the design patterns approach and spares the user from having to learn how to edit web pages and upload them. QuestGarden has been well accepted and highly praised in the year since its release.

The Present

The widespread adoption of WebQuests today continues to amaze me. If you type the word WebQuest into Google, over 3,410,000 web pages are found. By looking at the distribution of languages of those pages, one can get a sense of the penetration of the idea into various cultures around the world.

Language	Page Count	# Speakers	Pages per 100,000 Speakers
English	2460000	309,352,280	795.21
Dutch	98800	17,370,777	568.77
Catalan	29400	6,667,328	440.96
Icelandic	580	239,768	241.90
Spanish	554000	322,299,171	171.89
German	99400	95,392,978	104.20
Chinese (Traditional)	30400	29,793,070	102.04
Portuguese	135000	177,457,180	76.07
French	30800	64,858,311	47.49
Italian	29100	61,489,984	47.32

Clearly WebQuests have caught on in some countries more than others. The preponderance of pages in English comes as no surprise, but the next two languages on the list illustrate how a small number of enthusiastic individuals can make a difference. In the

Netherlands, teachers of English as a foreign or second language embraced the WebQuest idea early on. A modified version of the format called TalenQuest was developed there in the late 90s and widely promoted. Similarly, two educators in Catalunya picked up the idea from Portuguese translations of my writings by Brazilian educator Dr. Jarbas Barato and began to promote them in their region. As with many innovations, winning the hearts of a small number of people in the right places can make a large difference in dissemination.

The QuestGarden site has shown a similar pattern, with clusters of teachers adopting the tool through the efforts of specific teacher preparation and staff development institutions. As of this writing, over 7600 WebQuests have been completed (with 500 words or more). The authors come from over 120 countries.

Reflections on the Past and Present

As I look back over the last eleven years, I think I understand why WebQuests came to be so widely known. By sheer luck, I did several things right from the start.

First, I gave everything away. All the training materials, examples and templates I developed were freely available on my site and will continue to be so. I didn't lock any of it away behind a membership fee nor did I try to patent the idea or trademark the name. Educators are always short of money, and free is the best price to reach them.

Second, I used viral marketing. At the bottom of every page in the WebQuest templates was a link back to my page at San Diego State University. As more and more people created and posted WebQuests on their sites, a wider population was drawn to the original source.

Third, I kept at it. One thing I've learned by watching the careers of some of my colleagues is that staying with a good idea and refining it over time is a good path to follow. Those who jump on a new technology every few years sacrifice depth for breadth and have a lesser impact overall.

Starting this month, QuestGarden will begin to charge a small subscription fee. It will be interesting to see how the rate of adoption slows when part of the site is no longer completely free. Everything else on my site will continue to be freely available, though, and the number of high quality WebQuests created in QuestGarden will almost certainly make WebQuest.org even more useful over time.

The Future

No one knows what the future holds, of course, but I'm allowed to make some guesses.

WebQuests will continue to evolve as the web evolves. Today's web pages, for the most part, are like the pages of a colorful magazine. Lots of text interspersed with pictures here and there. The web is evolving, though, towards something that looks more like a movie. The burgeoning use of YouTube and Google Videos points in that direction. The basic structure of

WebQuests will probably evolve to include more interactive segments presented as short videos. By the end of the decade, the video may dominate so completely that the entire WebQuest may appear to be a video with buttons to branch to other videos.

Similarly, the interfaces we use on our computers will certainly evolve over the next ten years and WebQuests will change along with them. The desktop metaphor is more than 20 years old now and will probably be replaced by something more three-dimensional. I am now experimenting with the use of 3-D multiplayer virtual worlds as a vehicle for presenting a WebQuest. Learners will see themselves in that world as avatars that can be dressed in ways appropriate to the roles they are playing. Resources can be accessed by walking up to virtual books or by talking to automated avatars who represent human experts on a topic. While I expect that most WebQuests won't look like this, some will and they will be very engaging.

New forms of interaction are emerging in surprising ways as the web continues to grow. Over the last five years blogs, wikis and now podcasts have burst onto the scene and created lots of excitement. Some educators sometimes rush to experiment with these formats without thinking through the pedagogical ramifications. The WebQuest model has served as a useful way to structure the use of these tools by learners and I expect that to continue as new tools appear.

A final guess involves hardware. Laptops are replacing desktop computers in schools and in work life. They have many advantages but they are still too large to be optimal for many educational settings. I believe that before the decade is out we will see a better form factor for our computing hardware, something smaller than a laptop but larger than a PDA or mobile phone. Such devices would serve to bring information to the learners as needed, but would not dominate the interaction between learners as present computers do. The real learning in a WebQuest takes place in the face to face interactions between learners and the smaller the screen, the more salient that human conversation becomes. Portable computers with GPS capabilities also opens up the possibility of WebQuests that are anchored to real places in the physical world. Field trips recast as WebQuests will be immeasurably more interesting and effective.

Conclusion

The WebQuest model continues to grow and change, but at its heart it remains as an important tool for preparing young learners to think for themselves. Personally, I can't wait to see what happens with it next.

Note - This is an abbreviated version of a longer paper. The complete version will be available at http://webquest.sdsu.edu/papers/wqppf.pdf.