**Meet Bernie Dodge: The Frank Lloyd Wright Of Learning Environments**

***Why were WebQuests developed? Why should teachers use them? What does the future hold for educational technology? WebQuest creator Bernie Dodge answers those questions and more.***

Bernie Dodge, a professor of educational technology at San Diego State University, has been cited by [eSchool News](http://www.eschoolnews.com) as one of the nation's top 30 educational technology innovators. Probably best known as the creator of the WebQuest model for technology integration, Dodge is also the author of a number of educational software packages for children and technology tools for educators.

This week, Dodge shares with Education World readers his thoughts about WebQuests -- and about the future of educational technology.

**Education World:** What drew you to the field of educational technology -- at a time when it wasn't even a field yet?

**Bernie Dodge:** Hey ... My hair has more salt than pepper, but I'm not *that* old! Ed Tech as a field has been around in some form since the 1960s -- or even earlier. I was drawn to it because it seemed like a perfect blend of my backgrounds in engineering and teaching. My first job after teaching math in the Peace Corps was at my alma mater, Worcester Polytechnic Institute, helping faculty develop innovative off-campus learning projects. As part of that experience, I thought about getting into educational television production. I liked the idea of being both planful and creative about helping people learn. That drew me to the instructional technology doctoral program at Syracuse University. I dropped my Sesame Street career goal quickly when I saw the bigger picture of becoming an architect of learning environments, and that led directly to my job on the faculty at [San Diego State University](http://www.sdsu.edu).

**EW:** Would you describe briefly how and why you developed the WebQuest model? Did you start with a goal? a need? an inspiration?

**Dodge:** It started with a course I was teaching for second-semester student teachers. I wanted them to learn about an educational simulation called Archaeotype, but I didn't have a copy of the software or the means to show it. So instead, I put together an experience in which they worked in groups attacking a pile of different information sources about Archaeotype that I had lined up: a few pages of an evaluation report on the project, a few Web sites that described the software and the constructivist philosophy behind it, a virtual chat with one of the developers in New York, and a room-based videoconference with a teacher who had tested the program. The task was to divvy up these sources, integrate the information, and decide whether, and how, the Archaeotype program could be used at the inner-city school at which they were student teaching.

**EW:** Was the lesson successful?

**Dodge:** It was great! Having done my part ahead of time by organizing the resources, I had to speak very little during the two hours they worked on it. I enjoyed walking around and helping where necessary and listening to the buzz of conversations as students pooled their notes and tried to come to a decision. The things they were talking about were much deeper and more multifaceted than I had ever heard from them. That evening I realized that this was a different way to teach -- and that I loved it!

**EW:** How long did it take you to develop the WebQuest format?

**Dodge:** A few weeks later -- pretty much all in one sitting -- I put together a template, set up in the same way I had done the Archaeotype lesson: introduce the situation, list some information resources, give them a task that required grappling with the information, lay out the steps on what to do with the information, and then bring it to a conclusion. I used a search engine to look around for various names to give this way of teaching and soon settled on "WebQuest." At that time (February 1995), there were no pages with that word to be found. My students used my template to create their own interdisciplinary lessons. Soon after, Tom March used the structure to develop [Searching for China](http://www.kn.pacbell.com/wired/China/ChinaQuest.html), as part of his work for Pacific Bell's [Education First](http://www.kn.pacbell.com/edfirst) initiative. I wrote [Some Thoughts About WebQuests](http://webquest.sdsu.edu/about_webquests.html), an article for a distance education newsletter, and suddenly the idea began to catch on. That is how it all began.

**EW:** In the Overview section of [The WebQuest Page](http://webquest.sdsu.edu), you define a WebQuest as "an inquiry-oriented activity in which some or all of the information that learners interact with comes from resources on the Internet." Based on that definition, can't many other online activities, including Treasure Hunts and Subject Samplers, also be classified as WebQuests?

**Dodge:** I have to say that I'm not a big fan of Treasure Hunts or Subject Samplers, because sometimes I put myself in the shoes of some cantankerous school board member peeking into a lab and seeing what goes on there. It isn't easy to justify the expense of all that hardware, training, and infrastructure when most of what the kids are doing is merely reading pages on a screen and answering low-level questions about them.

**EW:** What elements or features do you see as distinguishing WebQuests from other Web-based activities?

**Dodge:** The key idea that distinguishes WebQuests from other Web-based experiences is this: A WebQuest is built around an engaging and doable task that elicits higher order thinking of some kind. It's about *doing* something with information. The thinking can be creative or critical, and involve problem solving, judgment, analysis, or synthesis. The task has to be more than simply answering questions or regurgitating what's on the screen. Ideally, the task is a scaled down version of something that adults do on the job, outside school walls.

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| Bernie Dodge, WebQuest creator, on his first WebQuest lesson:  http://www.educationworld.com/a_tech/images/bdodge.jpg  "I enjoyed walking around and helping where necessary and listening to the buzz of conversations as students pooled their notes and tried to come to a decision. The things they were talking about were much deeper and more multifaceted than I had ever heard from them. That evening I realized that this was a different way to teach -- and that I loved it!" |

**EW:** It's been said that teachers will integrate technology into the curriculum only if they can see how it will benefit themselves and their students. How do WebQuests benefit students?

**Dodge:** There are lots of worthwhile things to do with the Web in schools, and WebQuests are just one possibility. WebQuests lend themselves particularly well to topics that require higher-level thinking and tasks with many possible end results. Other forms of interactive lessons are applicable to other parts of the curriculum. The benefit to using WebQuests, once you have identified the right place to try one, is that it puts more responsibility on the learners themselves. That's a key benefit to the learners, because ideally they'll be getting some scaffolded practice at making sense of new information, parsing data that comes from something other than a textbook, accommodating the opinions of others, and organizing themselves and each other to produce something to be proud of.

**EW:** How do WebQuests benefit teachers?

**Dodge:** All teachers want to see that kind of student growth, so the benefit to them is seeing the center of gravity of the room move to where the kids are. If you've done the work of preparing a good WebQuest ahead of time (or selecting one made by someone else), you have a more gratifying day, by working with individuals and small groups as a coach rather than having to keep all those eyes on you as the only source of data in the room. Of course, as with all constructivist teaching, there may well be a mismatch between what's learned in a WebQuest and what's measured on standardized tests. Talented teachers are finding ways to hit both targets -- but it's not easy.

**EW:** What knowledge and/or skills does a teacher need to create a WebQuest?

**Dodge:** Several things are needed: some technical, some pedagogical. First, teachers need to be able to create Web pages, which is a useful skill to have anyway -- and one that gets easier every year. Second, teachers need to know where to find things on the Web, so getting deeply familiar with a good search engine like [AltaVista](http://www.altavista.com) or [Google](http://www.google.com) is a must. The rest has more to do with being a good teacher. Crafting an engaging assignment is something seasoned teachers can do in their sleep, and it's a critical part of designing a successful WebQuest. Finding a task that forces thinking about content is at the heart of the WebQuest. Without that, it's just another Web page. Finally, even though roles are not absolutely essential in a WebQuest, I find that it helps if teachers have more than superficial knowledge about cooperative learning strategies. Creating situations that force students to depend on one another is one of those things that distinguish great WebQuests from merely good ones.

**EW:** Is there a tool available to help teachers evaluate the WebQuests they create or use or to help administrators and parents evaluate the WebQuests students are involved in?

**Dodge:** Rubrics are great for evaluating complex performances, and creating a WebQuest is certainly one of those. With the help of some excellent staff developers at San Diego Unified School District, I've put together [A Rubric for Evaluating WebQuests](http://webquest.sdsu.edu/webquestrubric.html). It allows teachers to assign a score to a given WebQuest and provides specific, formative feedback for the designer.

**EW:** What are your favorite WebQuests? What elements or features make them especially worthwhile and enjoyable?

**Dodge:** My list of favorites changes all the time. Let me focus on a few that are both exemplary and not overwhelming to teachers thinking about getting into WebQuest design.

At conferences I always show Cynthia Matzat's [Radio Days](http://www.thematzats.com/radio) because it's so elegantly simple. It draws kids into the 1930s and '40s by having them create a radio play complete with sound effects and ads. It makes great use of the Web by making all those old sound clips instantly available and provides the right balance of structure and freedom so that every team's production will be unique. Cynthia recently told me that the plays created by the kids are actually broadcast on their local radio station.

Another one I like is [Journey Into the Unknown: A WebQuest on the Lewis and Clark Expedition](http://oncampus.richmond.edu/academics/as/education/projects/webquests/lewisclark), designed by Missy Lanza, Samantha Levin, and Molly Decker, students at the University of Richmond. It draws kids into learning about Lewis and Clark by giving them the task of creating a board game about it. That is the kind of task that students will see as an engaging challenge, yet doing it well requires mastering the facts and structure of the story.

Finally, any list of my favorites has to include [Hello Dolly](http://powayusd.sdcoe.k12.ca.us/projects/dolly), by Keith Nuthall. Keith steeps his students in several conflicting viewpoints on the topic of cloning and guides them to a discussion (and, ideally, a consensus) on what our government's policy should be about regulating cloning. I like this one because it brings into the classroom an issue that adults are grappling with right now. The experience of seeing the complexity of the issue and honoring the strongly expressed views of classmates seems like terrific practice for tomorrow's voters.

**EW:** What kinds of Web-based learning activities do you see teachers using in the future?

**Dodge:** Even though going wireless is just the next natural step in the evolution of computers, it has the potential for making a radical difference in the way we teach. Imagine having a number of flat pads with touchscreens no bigger than a standard notepad scattered around the classroom. At first, the devices will need a stylus for input, but in two years, they will start to be voice activated.

**EW:** How will those devices affect teaching?

**Dodge:** When such devices are common, teachers can bring the Web (and thus the world) to where the kids are, rather than forcing them to move to a desktop computer or a lab. It will allow educators to take better advantage of teachable moments. When a question comes up in class discussion, the teacher can deputize a student to look it up and bring back the answer while the topic is still in play. Teachers can integrate the Web with other media more seamlessly and put learners together around tables, rather than letting the computer dictate how groups are arranged. Once a few of these things get into the hands of creative teachers, we are going to see a lot of new teaching ideas bloom.

**EW:** Do you see a time when Web-based learning will replace text-based learning?

**Dodge:** There will always be paper-based books, but I think at some point in this decade it will make economic sense to distribute textbooks in purely digital form. Once there's a light, durable, wireless appliance that's cheap enough, schools will be able to assemble the best parts of what each publisher has to offer and download whatever parts are needed, as they are needed. That means that the information will probably be much more up-to-date and supplemented by access to human tutors and a community of other learners. That all takes money, of course, so let's hope that the economy continues to perk along nicely and that taxpayers see the value of putting more resources into schools.

Of course, teaching with WebQuests today is good preparation for being a great teacher in 2010!

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