Big6 Problem-Solving with Multimedia Web Design Teams

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In 1843, Thomas H. Jackson almost failed a course in his second year at the U.S. Military Academy at West Point. It was a course on drawing. Whatever the reason, it is significant that art was taken seriously enough, that one could fail it. In the pre-photographic age, it was essential that a military commander be able to draw an accurate sketch of a battlefield scene. If we lost that need with the advent of photography, we have come full circle today. I believe that Daniel Pink is correct: Today's world calls for left brain thinkers, those who have the ability to create and design. [Pink] The Big6 has been very useful in this endeavor.

The concept of design is built into the Big6 research process. I find that it is especially effective to teach design as part of Big6 #5, Synthesis.

Synthesis

Two fourth grade boys walked into my library media center one April morning. They were engaged in a very animated argument over when the Iroquois League of Five Nations became the League of Six Nations. The depth of their discussion impressed me, and made me wonder — what had made the students so excited?

I believe that there are several reasons that these students – and their classmates – are so unusually engaged in the topics they are studying. For one thing, these students are Big6ers. Secondly, they are in the midst of an activity that has stoked their creativity — these fourth graders were creating their own web pages using very advanced software, such as Adobe-Macromedia Flash, Fireworks, Freehand and Dreamweaver.

I've worked with web design and multimedia tools for years, and have taught workshops in the use of *FrontPage*, *Dreamweaver* and *Flash*. It has never been easy to sell these tools to teachers. So why was this project successful?

In 2005, I was asked to write a grant proposal for our school district. I based our proposal on a digital design curriculum that Macromedia created in a partnership with a school in Washington State. "Digital Design: Foundations of Web Design" is a program designed for high school students using the Macromedia suite of professional web design and web-authoring tools. Our grant proposal based on the Washington State curriculum was successful in obtaining Macromedia software and Smart boards for the schools and library media centers in the Clarkstown Central School District. Our program was unique in that it expanded the Washington State program into the elementary schools.

The Project

Once the new multimedia software was installed, I had to sell it to our teachers and students. Macromedia Dreamweaver, Fireworks, Freehand and Flash are powerful programs, but the software is a challenge to learn. Fortunately, we had some 4th grade teachers and a technology teaching assistant willing to take a risk. Every spring our 4th grade does a New York research project that they present to parents. After meeting with the teachers and the technology assistant, we put together a collaborative project where students would present using the Adobe-Macromedia software.

The collaboration team set up a timeline where students were introduced to the research project using the Big6 research skills. We intentionally did not introduce the new software to students until they had completed several weeks of basic research on their topic. We simply told students they would be building a web page with learning activities.

After students had obtained and analyzed a sufficient amount of information, we introduced the new software. We started with Fireworks, a graphic design program. I demonstrated a couple of things and told the students to "just play with it." An interesting thing happened: Most students went to the program and tried to repeat step for step what I had showed them. They soon bogged down, and hands went flying up. Some students just gave up and opened PowerPoint. A few students in the class jumped into the program and flew with it. Within a few minutes they were creating some neat pages. It was immediately evident that these were the "right brain" people that Dan Pink writes about.

Problem-solving with Design Teams

We approached the design process as a problem solving activity. We set up design teams for the project as needed. Each design team was responsible for one phase of the project. For example, one group of students was assigned New York geography; another was assigned New York history. Teachers and support staff were a part of each team, and provided support as needed.

At each team meeting, I presented the design team with some possibilities for creating a learning activity using our design tools. One team decided to create a jeopardy-type game using Macromedia FlashMX.

FlashMX is a challenging program, however if one is familiar with the basic elements, it is possible to download a lot of open source material to build with. I found an open source jeopardy game as a starter. This was also an opportunity to review copyright and fair use basics with students. The citation for this game is found on our project page.

We downloaded the jeopardy game and opened it up. When you open a Flash program using *FlashMX*, it's like opening the back cover of a fine tuned mechanical watch: You can see the gears ticking away. The questions and answers for the jeopardy game are built into the action script of the program. The students were fascinated with the action script. It wasn't long before they were able to make it work for them.

These problem solving teams often found teachers and student on equal footing. Everyone had to collaborate to solve problems that arose. For example, our technology teaching assistant worked with students in the computer lab to design web pages using *Fireworks*. When one student did something special, he or she would then show the others how to repeat it. Together they learned the program.

The Evaluation

The final project was well received by parents and community. The project was presented to parents and the community at a special open house. Students enjoyed challenged adults with the learning games they had created.

Students had constructed a special Big6 research page on their website with a separate link to each of the 6 elements of research. They met after the presentation to construct their evaluation page. When students completed their self evaluation it was particularly positive. They reflected on those areas where they could have done better and discussed methods to improve their research in future projects.

This project involved collaboration between teachers, computer lab assistants, and the library media center specialist. We met on a weekly basis to plan and support the project. Our instructional team

included three fourth grade teachers, Leslie Feiner, Brianna Kenna, and Brendan Nolan. Our computer lab support specialist was Doreen Maritato and our library media assistant was Rhonda Seidenberg. Our principal Eileen Mautschke provided complete support for the project.

References

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