

Reflective Practice: Group FLASH project

The Group FLASH project was an assignment for SED 671 to develop an instructional multimedia application. In collaboration with Talyn Simonian and Jonathon Abrams, we decided to develop an interactive multimedia tutorial designed to teach High School students about formulas and functions in Microsoft's Excel program. As a group, we were prepared to meet the challenges of working far apart by sharing and exchanging information through the internet. However, we still faced some individual challenges to coordinate our time and talents in producing our project.

As we divided the work, I became responsible for developing the navigation for the graphic user interface. Having developed the storyboard for the tutorial with my group, I felt this could be done successfully with a little more understanding of the subject. Thus began my venture outside my normal area of expertise, and into Excel. In time, I was able to understand what were some key learning objectives that would be necessary for a first-time user like myself. From this perspective, I was able to develop a constructionist framework in which to present students first the program interface (the tools they were to use to complete a project) and then a step by step guided hands-on example. Through our group discussions, we then fine tuned our tutorial to present the instructional information as a series of navigable screens illustrating: concepts, a practice example, video review, and quiz.

Once the planning for our tutorial was complete, it was only a matter of

execution. Using the internet to exchange images and text was critical for our coordinated efforts. Individually, I could develop a skeleton application with dummy buttons, code, and graphics. Then, upon receiving files from my group members, I could exchange the information to finalize the tutorial. One major obstacle to overcome was writing the code for the events that were to occur when a user would click on a button. Originally, I had intended to use Actionscript 3 to develop the actions for all the navigation and events on screen. However, my limited understanding of the code, and problems with version and platform differences resulted in the use of the older Actionscript 2 code. Notwithstanding, I was able to maintain the intent and functionality of our original plan with regards to the navigation and experience of our tutorial.

While Talyn developed the practice example and the video tutorial, Jonathon was at work developing the introductory animation and selecting the images for some of the buttons. Meanwhile I developed the navigation code for the user interface. By working with a storyboard and understanding how the tutorial should function, I was able to utilize simple roll-over buttons with attached Actionscript 2 code to trigger stop, play, and go to events. The storyboard also helped to develop the basic framework of the software by allowing me to create sections that would later be filled with information such as graphics, texts, and backgrounds.

In our group discussions we reflected on different pedagogical approaches and decided to employ the dual channel coding method of multimedia presentation. We thus used short explanatory phrases next to animated illustrations to concisely convey step by

step information on concepts and the practice example. For additional review, we included a video tutorial that covered the same steps in the practice example to help reinforce the concepts and procedures. This approach seemed to satisfy our concerns with the variety of learning modalities we would encounter. The tutorial, while relying heavily on graphics, was found to be visually interesting and engaging making it a valuable tool to stimulate student motivation and learning. Our initial focus group testing with other members of the Master's cohort resulted in positive feedback. From the cohorts' comments we were able to improve our project and deliver a finished instructional tool for the final presentation.

The finished project is representative of successful multimedia instructional technology. It is easily navigable and users are able to quickly orient themselves within the application. The navigation buttons also double as indicators to identify the section in which the user is working. The tutorial can be used sequentially or users can simply jump from one section to another or return to a previous section. The tutorial provides step by step instruction as text, animated illustrations, and spoken words. The tutorial also provides the opportunity to apply understanding in completing a hands-on project. In addition, links to other online resources are provided to encourage students to explore outside of the lesson to discover more information on their own. The quiz at the end of the tutorial provides the teacher and student with a tool for evaluation to determine subject matter retention or identify areas for improvement.

Overall, I feel this project is an important development for teachers and students,

as well as for the Master's program. As an educational tool for teachers and students, the tutorial is interesting and motivates student learning. It is a good resource for study aside from the traditional lecture/demonstration normally provided to students. In this way, it can empower students to become more responsible with their own learning while freeing the teacher's time to address other class issues.

In completing this project I learned it is important to stand aside from my everyday teaching experience to expose myself to other subjects. In this way I can sharpen my own skills as a teacher to better understand the general process of learning. This in turn will help me to better conceptualize the planning and integration of multimedia assets to improve student success in achieving learning objectives.