TECHNOLOGY-BASED LEARNING: USING WEB AUTHORING TOOLS TO ENHANCE INSTRUCTION IN THE CLASSROOM

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ABSTRACT

In recent years, many institutions of higher learning are rapidly moving towards integrating technology particularly the Information and Communication Technology (ICT) into the classroom. In this paper, we focus on a course in the Faculty of Creative Multimedia, in which students will learn the web-based multimedia authoring tools such as Macromedia Dreamweaver and Flash and then apply them to solve a problem on the web. In this course, the students, organised into small groups, will find an existing web site of their choice, make a critical analysis of its weaknesses and then reconstruct the site by using the multimedia authoring tools which will empower them to make the web site more media-rich and interactive. The purpose of the project is to inculcate into the students critical thinking, problem-solving, designing and collaborative skills. An online interview was carried out on the Internet chat-room and the students' comments will be discussed.

INTRODUCTION

Malaysia has taken on a firm step towards establishing an Information-rich society. With the setting up of the Multimedia SuperCorridor or the MSC, Malaysia will be linked electronically to the world. At the heart of the Multimedia SuperCorridor is the Multimedia University in Cyberjaya. The University was built to provide multimedia and related courses of education with the setting up of the Faculty of Creative Multimedia. In their studies, the students need to know how to author multimedia with an authoring tool. It is at this authoring stage that the application becomes multimedia as the user can add the different media types.

Authoring is integrating the different digital media elements such as text, graphics, sound, animation and video, into a coherent interactive application to convey a message or information (Neo and Neo, 1997). Authoring tools are software packages that allow the user or author to perform the authoring process. Today, there are web-based authoring tools, which allow users to create interactive and media-rich documents known as web pages that can be placed on the Internet. The Internet is now a popular educational and informational medium for this Net generation. (Tapscott, 1998)

THE COURSE: WEB AUTHORING TOOLS

The course here is an Internet application course in which students are taught to use specific web authoring tools, in this case, Macromedia Flash and Dreamweaver and then to make use of these tools to solve a problem related to the Web. Macromedia Flash is a very popular tool to create web animation. With

Flash, web-sites that just contain text and graphics can be transformed into more dynamic and multimedia-capable web-sites (Franklin and Patton, 2000). Macromedia Dreamweaver is also an industry standard for creating web pages. It has a user-friendly interface and the user need not be an HTML expert to create exciting and dynamic web pages. (Crowder and Crowder, 2000).

WEB-BASED PROJECT

The driving problem that the students need to address was to re-design a badly designed web-site on the Internet. Since most web-sites are becoming more multimedia-oriented, the students had to incorporate more than text and graphics into their web-sites to enhance them. This problem-solving project requires interdisciplinary skills involving multimedia technology and Internet design knowledge. In this project, the lecturer provided lectures on the understanding of the Internet and multimedia technology and on the basic skills in using the software as well as web-design. When implementing the project, the lecturer acted as a facilitator to guide the students.

The students were divided into groups of five by the lecturer and had to collaborate with one another to complete this task. Through collaboration, they will help motivate one another and work as team players to share ideas through inquiry and dialogue as well as to improve their thinking and social skills. Each group also had to create a report that list down the reasons for choosing a particular site as well as to design solutions or suggest improvements that they thought would greatly enhance the site without changing the content of the site. Then the group had to delegate the different areas of the project to each member according to what they saw as component tasks and to implement their suggestions. To complete the project, they had to use the prior knowledge that was taught to them about multimedia and Internet technology, design principles as well as the authoring techniques that were shown to them during their tutorials.

During the course of the project, students were allowed and even encouraged to go to the lecturer to ask for pointers on how to go about doing their project. They could either make an appointment personally or as a group to see the lecturer or they could use the Internet to chat with the lecturer, using instant messaging tools such as Yahoo Messenger. Each student had a unique Yahoo ID including the lecturer to allow for direct communications with the lecturer. Students also used the instant messaging tool to discuss the project among their group members. After completing the project, each group was required to give a brief presentation on their project to the entire class and to answer questions posed to them by the lecturer or the students themselves.

The project was assessed based mainly on such criterias as the students' ability to identify the shortcomings of the web-site, their suggested improvements, their ability to work collaboratively and the creative and innovative uses of Dreamweaver and Flash.

ONLINE SURVEY: STUDENTS' RESPONSES AND PERCEPTIONS

Ten questions were posed to the students in an online interview survey using the chat-room on the Internet. In general, the questions were well responded. The students were very enthusiastic about the project and found it very challenging working in a group environment in which they have to learn to share ideas and work collaboratively on a strategy, and cooperate with each other to successfully complete the project. .

On the whole, however, they felt they had learned a lot from the project as it was very much related to their real life experience and were able to understand the problem, work collaboratively, construct their own solutions to the problem, and determine their own learning outcomes. Some students believed that this kind of project will train them to think critically, improve their problem solving skills and help them in their future careers.

CONCLUSION

This Web-based project was chosen because it allows the students to perform critical thinking by defining the problems of the site and to come up with creative solutions to enhance the site on their own. Also, since the problem is an authentic and Internet-related problem, the students are highly motivated and able to draw from real-life experiences to complete the task. This project is a self-directed learning experience in which the students participated actively in their own learning process and determine their own learning outcomes rather than being passive receivers of knowledge or information imparted to them by the teachers. In the process, they learned to apply what they have learned previously to the project in a cooperative and collaborative manner, foster their critical thinking and problem-solving skill, an experience that enriches and enhances their learning process.

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