



## Students' perceptions of interactive multimedia mediated web-based learning: A Malaysian perspective

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While using the Web can be viewed nowadays as a new platform for delivery of course materials, there are still many educators who look to the Web as a replacement for their current teaching methods. This paper sought to investigate students' perceptions towards an interactive web-based learning environment, which consisted of using multimedia-mediated web-based learning modules, created based on Mayer's (2001) design guidelines, and the use of weblogs to capture the student learning process. Students were given pre-and posttests, and a survey to ascertain their reactions and attitudes toward this mode of learning. The results obtained were very positive and encouraging. Students generally found the multimedia-mediated web-based learning environment to be enjoyable and motivating, and were able to demonstrate their learning and skills of the subject domain via their weblogs. Results also gave strong support for the use of multimedia in learning modules that followed proper design guidelines which would better engage students in their learning.

Keywords: student-centred learning, web-based learning, interactive multimedia, malaysia

### Introduction

Web learning has become common in classroom teaching with most of the higher education institutions engaging in web learning or some form of online teaching (White and Weight, 2000; Palloff and Pratt, 2000; Alessi and Trollip, 2001). Most of the higher education institutions are engaged in web learning. The popularity of web learning is mainly due to the concept of "anywhere" and "anytime". Universities are becoming more involved in e-learning activities as lecturers are uploading teaching materials onto e-learning systems. When multimedia is introduced, it becomes an attractive feature for such e-learning initiatives. Mayer (2003) strongly posits the use of multimedia as an effective teaching and learning tool, as he stated that, "*the promise of multimedia learning is that teachers can tap the power of visual and verbal forms of expression in the service of promoting student understanding.*" Thus many web learning applications are now designed such that information is presented online in the websites and enhanced with multimedia features and interactivity, and follow certain design concepts (Svensson & Ostlund, 2007). Such a learning environment is deemed to be student-centred as students are empowered with the control and activity of these online modules. In such a learning environment, students are active in their learning process and are involved in acquiring and navigating through the content in the learning modules at their own pace. In Malaysia, the Government is calling for Malaysian institutions of higher learning to integrate ICT into their classrooms, to develop students with skills that would allow them to be effective IT workers in industry (Mat 2000). As such, institutions of higher learning in Malaysian are beginning to incorporate ICT materials in developing e-learning methods and in web-based courses (Hong, Abang Ekhsan & Zaimuarifuddin, 2005, Neo, 2005). However, not all educational applications are designed based on proper guidelines and there is still very little conclusive research in Malaysian classrooms on the impact of multimedia and design factors in web-learning applications on the student learning process.

### Interactive multimedia-based learning

Oliver and Herrington (1995) defined multimedia/hypermedia as an "*instructional medium which appears to hold considerable promise for teaching and learning.*" The way information is organised in a hypermedia environment has similarities to the human thought processes. (Oliver & Herrington, 1995).