ViEW – A New Way of Online Learning

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Highlights: ViEW is a 3-D online learning environment for cooperative learning. It provides several unique features than the commonly used online learning environment, such as providing the students with verbal and non-verbal communications, many forms of interaction, avatar, interactivity and a realistic learning environment. In order to study its effectiveness, ViEW had been utilized in one of Multimedia class and the results were very promising. Therefore it has potential to be commercialized to other faculties in UTM, higher educational institutions and schools in Malaysia.

Key words: Online learning, Cooperative learning, Virtual world, 3-D Virtual learning environment.

Introduction

ViEW is a 3-D online learning environment. It was created by using a virtual world application and designed specifically for conducting online cooperative learning. The idea behind this innovation was to create a better online learning environment for the students as the online and distance learning have become a trend as of late.

Background

Generally, online learning particularly in Malaysia is often conducted through several 2-D online learning environments which were generated by using several Web 2.0 applications such as online discussion room, chat room, blog and social networking sites. However, previous studies had reported that those environments have some limitations particularly in supporting interaction and communication (Sutcliffe and Alrayes, 2012; Bronack et al., 2006), although these elements are considered to be important in any sort of learning activities especially for cooperative and collaborative learning. These limitations have negatively affected students' learning outcomes such as their sense of presences, participation and learning satisfaction, which then impaired their learning performances (Bulu, 2012). Therefore a better online learning platform is needed, and virtual world is one of the latest technologies that have the best capabilities in supporting online learning as it provides users with verbal and non-verbal communications.

Description of the product

ViEW provides users with verbal and non-verbal communications, many forms of interaction, avatar, interactivity and a realistic learning environment. Thus we had utilized this technology to create our own 3D online learning environment, known as Virtual Educational World or ViEW. This 3D virtual learning environment provides students with realistic online learning environment which is suitable for conducting cooperative and collaborative learning activities. It is realistic because inside ViEW environment, every student is represented by a 3D avatar which can be customized in certain ways. Besides, every learning group is provided with their own group name, color, logo and also a discussion room which contains several discussion tools and furniture. Moreover, ViEW also allows students to cooperate in real time with many forms of interactions, not only restricted to text communication. For example, the students can communicate by using audio communication and at the same time they can work together in order to complete the task at real time. These sorts of interaction obviously are not supported by most of the 2D online learning environments. Moreover, we were also developed guidelines for properly conducting cooperative learning inside ViEW, which is based on Johnson and Johnson (1999) cooperative learning theory and Salmon et al. (2010) model of learning in 3D virtual world. According to the guideline, the students should be given a task which they need to work on cooperatively with their group members. Each task will requires them to interact and communicate with each other by using the discussion tools and the communication mediums provided by ViEW.

Impact on learning

As far as we are concerned, virtual world technology has been recently exploited for learning in several countries, but not in Malaysia. Hence, ViEW has been utilized in one of Multimedia class at the Faculty of Education UTM in order for us to study its' effectiveness. The learning sessions where conducted by following the guidelines that has been mentioned in the previous sub-topic. At the end of the study, the students' sense of presences, learning satisfaction and performance was measured by using several instruments that we had developed. The results of the study showed that the students' sense of presences, learning satisfaction and performances were high and they were actively interacting and cooperating with each other during learning. Moreover, the students also stated that

they are interested to learn in ViEW again in the future. Thus, the results indicated that ViEW has such a bright future as an online learning platform in our educational context. Furthermore ViEW has potential to be commercialized to other faculties in UTM, higher educational institutions and schools in Malaysia.

Advantages

There are several advantages of ViEW as an online learning platform towards education and community. First, it is a suitable platform for student-centered and distance learning, which currently are trending in most higher educational institutions around the world, and can make those learning activities more versatile than before. As the environment supported many forms of interaction and communication, this can lead to active participation among the students during learning and provides new and better learning experiences to them. Moreover, ViEW can generates high sense of presence and learning satisfaction for the students as it provides them with an immersive 3D environment. Therefor this will lead to better learning performance of the students as many previous researches had stated that these sense of presences and learning satisfaction are the important elements which can determine the success of any forms of online learning. Besides, ViEW also offers privacy, security and flexibility to the users, which means that learning can be conducted in a safe and private environment. From the technical perspective, ViEW can be accessed with just a PC with moderate specification. Thus it can be widely utilized by most of the educational institutions around Malaysia especially the higher education.

Commercial value

ViEW can be commercialized to other faculties in UTM, higher educational institutions and schools in Malaysia. The estimated price will be RM 80 which includes the environment, the user account for the teacher and several proper guidelines on using ViEW as an effective learning tool.

Acknowledgement

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