Exploring the Effects of Web-Mediated Game-Based Learning and Self-Regulated Learning on Students’ Learning

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ABSTRACT
This research focuses on exploring the effects of game-based learning (GBL) and self-regulated learning (SRL) on promoting students’ learning and the interactions between teachers, students, and peers. The experiment designed for this study was conducted in the course of “Media Marketing Management”. The effects of GBL, SRL, and their combination on the students’ learning performances are analyzed with the quantitative and qualitative data of students’ learning. Based on the results of this study, it is found that students who receive the combined teaching methods of web-mediated GBL and SRL have better learning performance than those receive traditional GBL in classroom, although insignificantly. Not only is the outcome of SRL and interactive learning improved, the efficiency of teaching is enhanced. The implications of this study are also discussed.

Keywords: Blended Learning, Experimental Design, Game-Based Learning, Learning Achievement, Self-Regulated Learning

INTRODUCTION
Applying e-learning as a support for more traditional teaching is a major trend in higher education (Yen & Lee, 2011). With the development of Internet technologies, the structure of education has been changed. Online learning has gradually become one of the learning and teaching methods used for higher education in Taiwan. Online learning has lifted traditional education models to a new level. Through model devices and online learning environments, students can learn at any time in any place. Students use computers as tools to access digital teaching materials through the Internet to learn.

Traditional Media Marketing Management courses are usually taught by teachers lecturing with explanations, where students have to
absorb the information passively. This type of spoon-fed teaching model can hardly attract students’ attention, and may lead to unsatisfactory learning effects (Tsai & Lee, 2012). Thus, the authors in this study applied game-based learning (GBL) in a blended course to help students’ involvement in this course, and improve their learning. GBL offers strong learning content scenarios, so that students may have chances for new experiences (Chen & Wang, 2009). Through role playing games, students can indulge in learning and devote themselves to it. In this study, the teaching in a Media Marketing Management course was designed with the combination of theoretical knowledge and interesting daily-life marketing practices, so that students could pretend to be marketing personnel to simulate the situation of working on an enterprise marketing plan combining theoretical knowledge according to their learning progress every week to complete their marketing programs. In the process, students’ learning was no longer passive; rather they actively got involved in the learning process. In order to find out whether this learning method was better than the traditional teaching method in improving students’ learning motivation and willingness to learn, this study re-designed teaching methods and integrated GBL into the blended course to help students with their learning, for the purpose of improving learning effects.

Universities and schools have tried to provide students better learning environments by equipping them with well-developed educational technologies. This effort has encouraged professors and teachers to use different technologies such as the Internet and computers in the classrooms (Hsu, 2010; Türel & Johnson, 2012). The Internet serves as a resource-based learning tool and brings new trends and applications for teaching and learning (Lin & Ward, 2011). However, it is difficult for teachers to focus students’ attention on an online or blended course in an environment that is full of shopping websites, online games, and social networking websites (Tsai, 2010a; Tsai, 2011a). Non-synchronous learning through the Internet allows students to learn based on their own progress. In this regard, the learning may be ineffective if the students do not first develop their regular learning habits. That is, students in an online or blended course should be trained to be independent learners to obtain better learning results. Thus, the authors in this study adopted self-regulated learning (SRL), which refers to the motivational orientations and learning strategies that students employ to attain desired goals (Puzziferro, 2008; Zimmerman, 1989) to develop their regular learning habits.

In web-based learning environments, students could attend lectures only to register time, place, subject, and to alter the order of attending lectures (Lee & Lee, 2008). However, it challenges teachers to concentrate students’ attention on an online or blended course in an environment that is full of shopping websites, online games, and social networking websites (e.g. Facebook). As King, Harner and Brown (2000) indicated that self-regulation of learning is more critical in the distance education context than the traditional context, it is suggested that teachers should develop students’ self-regulation of learning before providing online courses to them (Lee, Shen, & Tsai, 2008). SRL is regarded as one of the most important skills needed for life-long learning (Ifenthaler, 2012), and is employed to develop students’ regular learning habits in this study.

Given recent developments of educational technologies, however, it seems to make sense to consider online or mobile learning and GBL not as distinct experiences, but as experiences that could effectively be combined (Facer1, Joiner, Stanton, Reid, Hull, & Kirk, 2004). This study aimed to explore undergraduates’ interactions with teachers and peers through web-mediated GBL and SRL to facilitate students’ learning. The authors redesigned a teaching method for students from the Communications Management Department to learn through the Internet,
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