



Comparing hybrid learning with traditional approaches on learning the Microsoft Office Power Point 2003 program in tertiary education

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ABSTRACT

The purpose of this study was to determine the effectiveness of a hybrid learning approach to deliver a computer science course concerning the Microsoft office PowerPoint 2003 program in comparison to delivering the same course content in the form of traditional lectures. A hundred and seventy-two first year university students were randomly assigned into two teaching method groups: traditional lecture instruction (TLI) and hybrid lecture instruction (HLI). Each group received six 95-min periods of instruction divided into 4 sections: a) 5-min brief outline of the key learning points, b) 40-min lecture on general knowledge c) 45-min constructivist-inspired learning activities and d) 5-min summary on key learning points. In the beginning and the end of this study students completed a 17-item multiple choice knowledge test. Two-way analysis of variances (ANOVA), with repeated measures on the last factor, were conducted to determine effect of method groups (TLI, HLI) and measures (pre-test, post-test) on knowledge test. The measures main effect was significant, as well as the groups x measures interaction effect. Two independent-samples *t* test were conducted to follow up the significant interaction. Differences in mean ratings of knowledge performance between the two teaching groups were not significantly different at first measure, while the TLI method group yielded a significantly lower mean rating at second measure. The findings indicated that HLI approach might be a superior option for undergraduate students on learning the Microsoft office PowerPoint 2003 program.

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1. Introduction

Until recently, one of the big questions in distance education was whether it delivered comparable outcomes to traditional classroom instruction (Ali & Elfessi, 2004; Brown & Liedholm, 2002; McLaren, 2004; Russell, 1999; Schulman & Sims, 1999). Now, the question generating research and discussion is why not have the best of both worlds? In an effort to address this question, a new course delivery style known as the hybrid or blended course evolved that combined the best features of online learning and traditional classroom learning (Dziuban, Hartman, & Moskal, 2004; Graham, 2005; Martyn, 2003; Reasons, 2004).

Hybrid learning course model, essentially comprises classroom face-to-face interaction and online computer-mediated communication (Mitchell & Honore, 2007). The hybrid face-to-face interaction and computer-mediated communication teaching and learning come in different terms. According to Smith and Kurthen (2007), these terms include “web-enhanced”, “hybrid” and “fully online” teaching and learning. Web-enhanced courses are usually face-to-face interaction based, with only course outlines and course announcements being uploaded for the students to have online access to. Hybrid courses have significant e-learning activities, including online quizzes and synchronous or asynchronous discussions, in addition to traditional classroom face-to-face teaching and learning. Fully online courses usually refer to distance education through online media. The Sloan Consortium (Allen & Seaman, 2006) further classified web-based learning environments by the proportion of content and activities delivered online: (1) web facilitated courses (1–29%); (2) blended/hybrid courses (30–79%), and (3) online courses (80+%).

Although the hybrid delivery style is starting to be seen as a viable solution to the problems of online and traditional classes, initial feedback is still cautious, yet primarily positive (Reasons, 2004). Studies have shown that most online learners do prefer some face-to-face contact with instructors and tend to be more successful when this occurs, thus supporting the hybrid course model (Riffell & Sibley, 2005).

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Initial research also seems to indicate that student success rates in hybrid courses was equivalent or slightly superior to traditional courses, and that the hybrid courses had lower dropout rates than do fully online courses (Young, 2002).

Despite the positive feedback, there is still concern that the hybrid course option may not be the solution to distance education problems. Student confusion about the combined online and traditional delivery styles, increased student workload in hybrid sections, and weak online components are all concerns being raised (Reasons, 2004). Still, the hybrid course model is quickly gaining popularity among institutions with a large number of wholly online courses, including the Department of Physical Education & Sport Sciences at Democritus University of Thrace (DPESS-DUTH).

Moreover, e-learning technology developed around the hybrid paradigm is beneficial for improving the quality of learning, but is useless if it is not based on pedagogical prescriptions (Papastergiou, 2007). Pedagogical principles are theories that govern good educational practice. Both Thurmond (2002) and Oliver (2001) stated that the use of learning theories could contribute to the quality of hybrid courses by providing a framework for the development and implementation of appropriate teaching–learning activities. Woo and Reeves (2007) identified three main learning theories; behaviorism, cognitivism, and constructivism. Behaviorist learning theory focuses on observable behavior (objectivity) while cognitivism has a focal point on unobservable behavior (subjectivity). Constructivism emphasizes the construction of new knowledge by the learner, as well as a focus on active learner-centered experiences (Young & Maxwell, 2007). Presently, the educational environment is changed from teacher-centered to student-centered. Constructivism is a learning theory that could prove useful for designing and developing a hybrid learning program based on active learner-centered experiences (Low, 2007).

Therefore, this study focuses on differences between the hybrid learning approach and traditional learning approach in the knowledge acquisition of Microsoft office PowerPoint 2003 program. Constructivist design was applied in these approaches to help students develop constructive learning habits. In the hybrid learning approach 67% of content and activities delivered online computer-mediated communication and 33% of content and activities delivered through classroom face-to-face interaction.

2. Review of literature

2.1. Constructivism theory in hybrid learning

Today with the emergence of the hybrid learning environments, educational delivery has moved from just online instruction towards a blend of online and face-to-face approaches. Hybrid learning goes beyond barriers of time, location, and culture and has created more and better opportunities for learners and instructors. Due to these advantages many institutions and universities moved from online to hybrid learning programs and this is a fast tendency (Gómez and Igado, 2008). Research shows that this combination has the potential of promoting learner-centered, active and constructive learning (Dori & Belcher, 2005; O'Donnell, Hmelo-Silver, & Erkens, 2006; Salomon & Ben-Zvi, 2006; Stahl, 2006). The pedagogical framework that enhances hybrid learning's advantages is constructivism.

Constructivism is a theoretical foundation that supports a transformation from teacher-centered to a learner-centered (Young & Maxwell, 2007). Constructivism theory, influenced by the work of Piaget and Vygotsky (Woo & Reeves, 2007), encourages learners to build their own body of knowledge based on individual experience and to apply this knowledge directly to their environment. In constructivism, the individual is at the center of the social process, with the focus on learning rather than on teaching (Ali, Hodson-Carlton, & Ryan, 2004). The theory states that: there are multiple ways of understanding knowledge; reality is created by an individual; and, knowledge comes from a personal interpretation of interactions with the world.

The structure of the learning environment, based on constructivism, is to promote opportunities that encourage and support the building of understanding. The constructivist's perspective indicates that the educator plays the role of facilitator, while the learner's role is one of the constructing realities through interactions with the environment (Hiemstra, 2007). Constructivism directs students to: be active in the learning environment; develop social and interpersonal skills; enjoy learning; have an understanding of the content being taught; and learn to think in an efficient manner (Low, 2007). Knowing how to think enhances students' decision-making with real-world issues, and facilitates the development of social and interpersonal skills.

Regarding the effects of constructivism theory in the hybrid learning environment, it is indicated that successful students in an online course generally used constructive learning strategies and the effect on students' knowledge construction was statistically significant (Yukselturk & Bulut, 2007). Knabe (2004) suggested that hybrid learning environments, coupled with constructivist design, are the key to developing successful courses for the next generation of students. Gerber, Grund, and Grote (2008) claimed that students could better understand the key concepts and construct their own knowledge when classroom lectures were combined with online discussion activities. In the same context, hybrid instruction was beneficial to students because it takes both instructivist and constructivist approaches in its design and the process (Delialioğlu & Yildirim, 2007). Therefore, it was believed that in the hybrid learning environment deploying a constructivist instructional method, students' knowledge acquisition would be higher than those taught without a constructivist instructional method.

2.2. Prior study in hybrid learning

Distance learning is often defined as “any learning setting where faculty and students are physically separated” (Martyn, 2003). The hybrid, or blended course, is designed to keep the online course's flexibility while retaining the traditional course's face-to-face interaction, often a crucial element to student success (Brooks, 2003). The hybrid course's purpose is to “end the divide between Traditional and Online instruction by blending approaches to better meet students' needs” by ending the vacuum of fully online offerings (Laws, Howell, & Lindsay, 2003). In addition to the student benefits, the hybrid model is designed to enhance learning by better meeting specific course needs (Voos, 2003).

According to Rovai and Jordan (2004) hybrid learning is “a flexible approach to course design that supports the blending of different times and places for learning, offering some of the conveniences of fully online courses without the complete loss of face-to-face contact. The result is potentially a more robust educational experience than either traditional or fully online learning can offer”. The big benefit is the idea that “learning is a continuous process,” not a solitary event that occurs a few times a week in a classroom. By using multiple delivery

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