Student Satisfaction: Face-to-Face with Online

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ABSTRACT

An empirical analysis was conducted to compare Face-to-Face learning to three formats of online learning: hybrid, asynchronous, and synchronous. Student satisfaction was used as a surrogate to measure success in learning environments. Over 200 students from eight disciplines took part in a university wide study. The study found no significant difference in student satisfaction among the four learning environments. Directions for future research were proposed.

Keywords

Student satisfaction, e-Learning, online learning, synchronous learning, asynchronous learning, hybrid learning, face to face learning

INTRODUCTION

Prior research indicates that students are less satisfied when using asynchronous e-Learning format for unfamiliar topics like databases and more satisfied using asynchronous format for more familiar topics like word processing (Piccoli, et al., 2001). This study compares synchronous e-Learning format with traditional formats to understand the research question: Are students satisfied with unfamiliar topics when using synchronous e-Learning format?

This research presents the findings of an empirical study conducted to compare a VLE using synchronous hybrid e-Learning environment with a traditional classroom setting. Synchronous hybrid e-Learning environment is one where portions of the interaction among the participants takes place in real-time, albeit virtually, and the remaining portion is taught in a traditional (face-to-face) classroom format. The next section presents the research background followed by hypothesis definition, research design, results, discussion, limitations of the study, future research direction, and conclusion.

PAGE SIZE

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Face-to-Face

Brown & Liedholm (2002) compared the outcomes of three different formats for a course in the Principles of Microeconomics (live, hybrid and virtual) and found that the students in the virtual course did not perform as well as the students in the live classroom settings and that differences between students in the live and hybrid sections, versus those in the virtual section, were shown to increase with the complexity of the subject matter. The researchers also concluded that ultimately there is some form of penalty for selecting a course that is completely online.

In addition to the comparisons of learning outcomes for courses taught in hybrid, virtual and traditional classrooms settings, research in this area also highlights the importance of the influence of self regulation (ability to control actions and decisions) and control of the learning environment (Hodges, 2005; Piccoli et al., 2001).

Hybrid e-Learning

Current research provides a mixed response on the subject of advantages and disadvantages of using a hybrid approach to teaching. Webb, Gill, & Poe (2005) examined the differences between pure versus hybrid approaches to teaching using the case method and found that students’ online discussions may enhance learning in case methods when taught using a hybrid approach. In a comparison of traditional and technology-assisted instruction methods in eight sections of a business communications class, where live versus hybrid formats were compared, an improvement in writing skills was found in students who participated in the hybrid course, particularly for those whom English is a second language (Sauers & Walker,
2004). McCray (2000) found courses which combine online learning with the traditional classroom can help students to become more engaged in rich classroom interactions by appealing to different learning styles through variety in content delivery.

**Asynchronous e-Learning**

Piccoli et al. (2001) examined differences in learning outcomes for students training in basic information technology skills in a traditional classroom with those in a virtual one. No major differences were found in the performance of students in the two environments. There were however, differences reported in computer self-efficacy.

Piccoli, et al. (2001) state that participants of asynchronous VLEs have difficulty managing the high degree of control, feel overburdened by the shift of responsibility and control to the learner, feel isolated, experience anxiety and encounter difficulty in time management. These challenges have not yet been found to be evident in synchronous VLEs.

**Synchronous e-Learning**

Piccoli et al. defined the six learning environment dimensions and how asynchronous e-Learning apply as shown in Table 1. This study provides how these dimensions apply in synchronous formats.

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Definition</th>
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<tbody>
<tr>
<td>Time</td>
<td>The time of instruction. Asynchronous formats free participant from time constraints.</td>
</tr>
<tr>
<td>Place</td>
<td>The physical location of instruction. Asynchronous formats free participant from geographical constraints.</td>
</tr>
<tr>
<td>Space</td>
<td>The collection of materials and resources available to the learner. Asynchronous formats provide a wide array of resources.</td>
</tr>
<tr>
<td>Technology</td>
<td>The collection of tools used to deliver learning material and to facilitate communication among participants.</td>
</tr>
<tr>
<td>Interaction</td>
<td>The degree of contact and educational exchange among learners and between learners and instructors.</td>
</tr>
<tr>
<td>Control</td>
<td>The extent to which the learner can control the instructional presentation. Control is a continuum enabling the design of varying degree of learner control (Newkirk, 1973).</td>
</tr>
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</table>

**Table 1. Classification of Dimensions of Learning Environments**

**Time dimension**

In comparison to traditional classrooms “when instruction is delivered asynchronously in [asynchronous format], participants retain control as to when they engage in the learning experience. Learners determine the time and pace of instruction” (Piccoli et al., 2001, p. 404), the time constraints for participants in Asynchronous formats are therefore removed (Piccoli et al., 2001). In synchronous formats participants have to be present, albeit virtually, at the time of instruction delivery. Participants in synchronous formats therefore do not have control over when they can engage in the learning experience. Learners’ ability to be able to control their engagement in the learning experience is often cited as an advantage in asynchronous learning, this option is not available in synchronous formats. In the current study recording of each class session was made available to students giving them the ability to access the archived session at any time. Consequently, the “anytime” benefit of asynchronous formats was achieved.

**Place**

Participation can be done from anyplace. This frees participants from geographical constraints. In this case, synchronous and asynchronous e-Learning are identical.
Space

The collections of materials and resources available to the learner are comparable in asynchronous and synchronous formats. The difference however is on the level of access, while both synchronous and asynchronous formats are online in synchronous formats instruction is being delivered live so learner have to differ much of their access to the collections of material and resources until after the instruction.

Technology

The technologies available in both synchronous and asynchronous formats are similar. The main difference here is synchronous formats use technologies that support real-time delivery in addition to all the technologies used in asynchronous formats.

Interaction

Asynchronous interaction is time delayed. Synchronous interaction on the other hand has real time interaction between learner and instructor and among learners.

Control dimension

Control in an asynchronous format is defined as: “The extent to which the learner can control the instructional presentation.” (Piccoli, et al., 2001, p. 404). When compared to traditional classrooms, asynchronous formats allow participants to control the pace and sequence of material during instruction (Piccoli et al., 2001). In synchronous formats participants’ control over the pace and sequence of instruction material is somewhat limited. In the current study for example, while participants were able to move around the instruction material in the sequence and pace they chose, they were re-directed to the instructor-led page each time the instructor changed the page. In the archived session however, participants had control over the pace and sequence just like in the asynchronous format.

HYPOTHESES

H1a: Students in traditional learning environments will report higher levels of satisfaction than students in hybrid learning environments.

H1b: Students in traditional learning environments will report higher levels of satisfaction than students in asynchronous learning environments.

H1a: Students in traditional learning environments will report higher levels of satisfaction than students in synchronous learning environments.

REFERENCES