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Learners View of Blended Learning in an Information Technology Classroom

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Abstract

The purpose of this study was to investigate the learner's perceptions and the effects using online discussion as an instructional modality of increasing learner's participation and interaction on the traditional classroom IT Essentials students in ZU. The direction of the traditional classroom teaching and learning has shifted towards new methods of teaching and learning through the use of Information and Communication Technologies (ICT). The advents in technology enable the distributed structure of knowledge transfer. This becomes significantly important for developing countries. Over the past years, tertiary educational institutions in UAE have used orientation activities to improve the learners' learning experience while they are undertaking traditional face-to-face teaching. This paper studies the issues regarding the implementation of online learning in developing countries and especially those aspects of Technology-Based Learning (TBL) that could be modified to satisfy the needs of a limited educational infrastructure. This study examines learners' perceptions of integrating online components in undergraduate information technology courses where students completed online learning modules while in class discussion. The findings revealed that the majority of learners responded that the asynchronous discussions provide a user-friendly interface to motivate their learning in instructional objectives. The findings indicate that participants in a required course rated the online modules considerably well than those in a traditional face-to-face course. For most participants of the study, this was their first experience completing an online learning activity or module. Future research is encouraged to explore the effects of interspersing online discussion that are significantly shorter in length into the traditional F2F classroom model. The contribution of this research is to provide greater insight into which factors promote e-learning success.

Keywords: Asynchronous learning; Blended learning; Technology-based learning

Introduction

Several studies suggest that online education and blended instructions (a “blend” of online and traditional classroom methods) can be as effective as traditional classroom education. Few studies have underlined the importance of learner satisfaction with online teaching methods, especially in the transition to online education from traditional teaching methods. This research studies learners’ views of integrating online components in one undergraduate information technology course where learners completed online learning modules prior to class discussion. The results indicated that participants in the blended course rated the online modules considerably better than those in a traditional classroom course. In the traditional UAE Information Technology classroom, which is an educator-centered learning environment, educators are active and learners are passive. In the traditional Emirati learning environment, it is not common for educators and learners to interact and to share their ideas and to support their views. To motivate learner’s participation, based on the different views in the literatures, the online education appears to provide a nature way for using online information technology language to encourage discussion in information technology classroom. Learners need to be given the opportunity to participate and interact, to learn by constructing knowledge and reflecting their experience in the learning environment as stated by Eastmond (1995). The asynchronicity of online participation allow learners to have flexible time to learn by reflecting on topics before they comment online tasks. Learners can participate and interact from any place in which they have access to a networked computer. The use of online discussion in conjunction with the F2F learning refers to as asynchronous conference, electronic forum, or text-based computer conferencing within the literatures (Caldwell, 1998; Collins-Brown, 2001; Rossman, 1999; Santo 2000). Online discussion allows for time-independent interaction that ranges from simple email discussions between individuals.

The Purpose of the Research

Although online education (and some blended methods that integrate online modules into traditional F2F classes) continues to grow, it still remains at an early stage of development. Thus, instructors of online education need more understanding of how learners view the components of e-learning (because learners view is critical to participation, interaction, and learning) along with how to apply these methods effectively to improve learning (Koohang & Durante, 2003). This research aims to present the effectiveness of the use of online learning modules in the traditional undergraduate information technology (IT) course for increasing learner’s interaction and their perception towards online learning. The results raise important considerations about using online learning for IT instruction. Number of studies have been performed on the use of synchronous communication (Chun, 1998), or email and collaborative learning (Cheng, 2000), but other medium such as online discussion have not yet been studied in depth in information technology learning. It is essential for learners to actively participate and interact online according to Lipponen (1999); however, it is not enough. The quality of participation in online discussion is important. The purpose of this research was to present an empirical study to investigate the effects of using online modules for increasing learner’s participation and interactions and their views about online learning in a traditional face-to-face environment. Cashion and Palmeri claimed that the “online learning occurs when the delivery of education or training is carried out via an intranet or the Internet”. This research is concerned with issues related to the purveyance

of support of TBL by investigating quantitative and qualitative data of the IT Essential case study. This work aims to establish the role of feedback in e-learning and identify the effects that feedback purveyance has to both learners and educators.

The research questions discussed in this study were about:

1. The way the uses of online discussions are viewed by learners in attaining instructional objectives?
2. The learners' views of the weakness and strengths of using online discussion in traditional instructions?

Methodology

The data for this research are based on learners' experiences taking an online learning course offered by the College of Information Technology at Zayed University in Dubai. The online course offered by the CIT, which is also referred to as "learning course" in this research, were developed by Cisco, a leading vendor of online technical training products. The course provides hands-on learning exercises, and includes the use of multimedia. The course is divided into ten modules. At the end of each module, learners take an examination to test their progress and strengthen their technical skills and this skill covered in the instruction. Each online learning class is designed to be the equivalent of about two to four hours of classroom instruction. The participants in this study were 13 third-year students who have taken IT Essentials as a core course in their major in information technology. The reasons of selecting the course were twofold. First, the author taught IT Essentials course, which is considered as a content-based course for enhancing learners' technical and computer competencies. Second, learners in IT major have developed better skills in using the online modules in traditional classroom than other non-information technology majored students. Online discussions were applied in the course to provide a web-based and threaded discussion for outside classroom discussions. A survey was distributed at the end of the semester to investigate learners' views toward the use of online discussions in the traditional classroom instructions.

The survey was designed by the author and consisted of three parts. The first part of the survey contained background information of learners experience with online discussion. The second part of the survey was about questions regarding learners' views toward online discussion and online modules used in traditional classroom. This part consisted of 10 items in a Likert-type scale with common response formats (e.g. 5 points) (Dowson, 2007). The third part of the survey used open-end questions to draw learner's views weaknesses and strengths of using online discussion in the classroom. The responses to the survey items were coded and entered into a computer data file for analysis.

Findings and Results

- Learners background information

Close-end questions were used to search for background information of learner's online experience.

Learners background information	Assessment	
	yes	no
I am a first time user of online discussion.	8	5
I attend an online course in a traditional classroom for the first time.	13	0
I find accessing online discussion for the first time difficult.	7	6
I find participating in an online discussion for the first time difficult.	9	4

Table 1. Learner's background information

The results in Table 1 indicated that the majority of learners participated in the IT Essentials class were the first time users of online discussions (62%) and the first practical experience of using online course in class (100%). In terms of accessing online discussion, over half of the learners (54%) found it difficult to access online. The learners (70%) found it difficult to participate for first time online.

- Learners views about online course

Responses to research questions about “The way the uses of online discussions are viewed by learners in attaining instructional objectives?” and “The learners’ views about the weaknesses and strengths of use of online discussion in traditional classroom instructions?” were discussed down below.

According to the results in Table 2, it is indicated that learners were satisfied with the participation in online discussion as an instructional method that eased their understanding of the course (Mean is 3.8) and the course goals (Mean is 4.2) and also helped the learners to retain and construct more knowledge (Mean is 4.15). The Likert-type scale with common response formats (e.g. 5 points) was used to evaluate the assessment (Mean value) of learner's views expressed in the survey.

Learners views about online discussion	Assessment [Mean]
Online discussion helped me enhance the knowledge about the course.	4.15
Online discussion used as an instructional instrument helped me obtain better understanding of the difficult chapters in the course.	3.8
The online hands-on practical experience helped me enhance my technical skills.	4.8
Online discussion helped me learn more about the practical exercises in the course.	4.3

The new instructional material was faster understood by using online discussion.	4.2
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Table 2. Learners views about online discussion

- Learners motivation and interaction in online discussion

The results of the survey showed an increased interest of online discussion in the traditional classroom (Mean is 4.3). Learners indicated that with online course in the classroom they gained more self confidence (Mean is 4.3) and they increased their participation and interaction online (Mean is 4.2).

Learners motivation and interaction with online discussion	Assessment [Percentage]
Interest of online discussion in traditional classroom	70%
Gain of self confidence	70%
Participation and interaction online	54%

Table 3. Learner's motivation and interaction with online discussion

- Evaluation of online course in traditional classroom

I appreciated the online course a great deal. (Mean is 4.0)

I got motivated in learning the online course. (Mean is 4.5)

I gained more knowledge about hands-on exercises by using online learning. (Mean is 3.4)

I was motivated in getting higher grades in the course. (Mean is 4.4)

Evaluation of online course in classroom	Assessment [Percentage]
Appreciation of online course in classroom learning	54%
Increased interest in online course	62%
Gain of knowledge by using online learning	46%
Increased motivation by using grade incentives	70%

Table 4. Evaluation of online course in classroom

Lipponen, L. (1999). Challenges for computer supported collaborative learning in elementary and secondary level: Finnish perspective. In C. Hoadley (Ed.), Proceedings of CSCL '99: The Third International Conference on Computer Support for Collaborative Learning (pp. 368-375). Mahwah, NJ: Erlbaum.

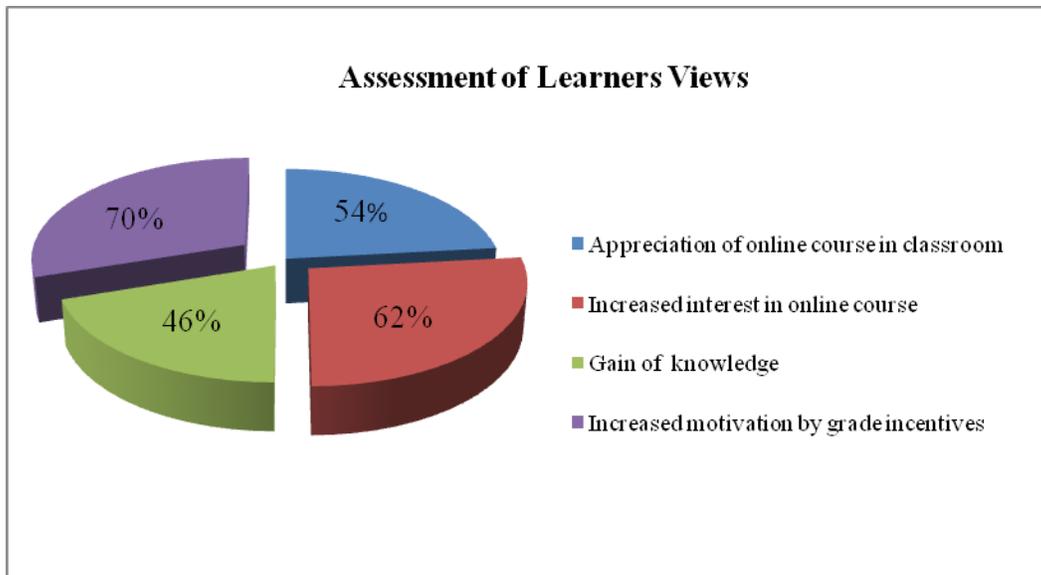


Figure 1. Assessment of learner's views

- Learners interaction with online discussion

The online discussion was used effectively by learners and educators to increase both, learners and educators participation in online course (Mean is 3.8). The results indicated that learners and educators increased also the interaction with each other outside the classroom (Mean is 4.2). The learners among themselves as well as increased their participation and interaction (Mean is 4.8).

Open-end questions were used to investigate the learner's views about the weaknesses and strengths of online discussion and online course in traditional classroom and results were reported by 13 learners in an open-end format. Responses to the weaknesses of using online discussion in traditional classroom viewed by learners were time consuming in preparing for the class and posting online messages (46.1%) and exchanging personal ideas online (23%). Most learners reflected that online discussion increased participation and interaction in online learning (84.6%), and improved communication and writing skills (69%). Learners also indicated that they spent a great deal of time reviewing course materials online (38.4%), and it encouraged learners self-confidence and learning in blended environment in both space and time (23%).

Discussion and Conclusion

The online course offered in the traditional classroom helps learners increase their knowledge and interests in retaining the course material more, allows increase self-confidence and self-managed time to learn difficult topics and promotes independent learning. Both, online discussion and traditional writing assignments provide learners with the opportunity of online interaction among learners to learners and educators to learners.

The electronic media in the traditional classroom helps information technology learners to become positively motivated, with increased self-confidence and interest to have more time to acquire complex educational material and to increase their participation in class. In addition, the ability of the educator and learners to communicate outside the classroom presents an improved teaching strategy for learners' motivation and interaction online to increase. In this research, learners viewed the increase information technology competency by getting engaged with electronic medium that permits more learners to participate and interact in online learning than in traditional face-to-face class.

With the usage of technology and online discussion in the traditional classroom, it allows both in-class discussion and traditional writing assignments to promote in and out class encouragement, motivation, and interaction among learners to learners and learners to educators. It is to note that the feature of online discussion forum where messages were viewed in public instead of in person and were saved for others to read for the length of the semester long is considered a novelty in the traditional classroom teaching. Learners claim that time to write messages and check their accuracy prior to posting are inconvenient and tedious on contrary, learners from developed countries perceived the increased technical writing competence by engaging with online discussions.

The results of the research align with number of researchers that effectiveness of using technology in the traditional classroom is significant. The electronic environment helps information technology learners engage more frequently and become motivated in class, with greater enthusiasm and self-confidence. Relan and Gilliani (1977) defined "the ability of the instructor and students" to use the online discussions create a 'new dimension to the design" of educational strategies in the classroom. In spite of the advantages of online learning in class, there is also a need to further research the pedagogical teaching strategies applied in computer aided blended teaching. The results of the research were aligned with several literatures providing the effectiveness of the online learning in the traditional classroom.

The study investigated learners' views of the use of online learning in an information technology classroom and presented empirical views of integrating electronic medium in traditional computer assisted technological learning. The study was limited to investigating 13 learners from two classes and may not be considered to be a general case of the research. The results appear to be of an interest to educators trying to implement online modules on their traditional classroom class. The research may also be important to educators as they prepare for changing the method of delivery of their course and for future increase of the interest by learners in the area of information technology.

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