



Science, Movement and Health, Vol. XV, ISSUE 2 Supplement, 2015
September 2015, 15 (2, Supplement): 442-448

Original article

EFFECT OF BLENDED LEARNING ON STUDENT'S SATISFACTION FOR STUDENTS OF THE PUBLIC AUTHORITY FOR APPLIED EDUCATION AND TRAINING IN KUWAIT

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Abstract

Aim. Blended learning is becoming one of the important applications by integrating e-learning and traditional face-to-face instruction together. The purpose of this study was to determine the effectiveness of a blended learning approach on student's satisfaction in the Public Authority for Applied Education and Training students, Kuwait state

Methods. 30 student at the first and second grades the public authority for applied education and training. Equally randomly assigned into two teaching method groups: traditional lecture instruction (TLI), and blended lecture instruction (BLI). Each group received of instruction program for ten weeks, three days in the week. At the beginning and the end of this study, students completed a multiple choice of students' satisfaction scale; T test analysis was conducted to determine the effect of method groups (TLI, BLI) and measures (pre-test, post-test) on soccer test.

Results. The results revealed that significant Differences in mean ratings of student's satisfaction between the three teaching groups for the blended lecture instruction group.

Conclusions. The findings indicated that BLI approach might be a superior option for undergraduate students with learning of physical education course.

Key words: blended Learning - Student's Satisfaction, Kuwait state.

Introduction

In recent years, With the development of ICT (Information and Communications Technology), computer and the internet have become widely used in the higher education, and the trend of higher education is globalized and sharing. According that, the Higher education has implemented educational opportunities for adult learners to be taught face-to-face in the class setting along with additional course instruction via the Internet, using on-line instructional tools such as Web Logs (blogs), discussion boards, and chat rooms. This learning format is known as hybrid learning or blended learning (Buzzetto-More, Sweat-Guy, 2006; Lindsay 2004). As a modern instructional method, "hybrid learning" or "blending learning" is increasingly popular throughout the world.

This course design has the potential to improve student satisfaction with their course because the learner experiences a dynamic learning model that enables them to become more involved in their educational experience (Gulsecen, et al., 2004). Involvement of the student in the learning process can support personal ownership of the learning experience because the student becomes empowered to relay personal experiences or to incorporate ideas that have been learned within the context of the course (Young, 2002).

Traditions in sports involve players wearing uniforms, the use of referees, announcers, beginning play with a jump ball in soccer and a coin toss in football, keeping statistics on game play, etc. Traditions can play a powerful role in education in students' understanding of how various traditions relate to the content of what educators teach and how the content is taught (Regina, 2008). Traditions can also transform students' minds to think beyond themselves and be used as tools the students' can use to understand and change the world.

Blended learning can be considered an advantageous instructional model because it can be designed in a manner that can encourage students to become actively engaged in the instructional process. Student involvement in the blended course design supports self-directed learning, social engagement, and reflections (Dodd, 2001; Lindsay, 2004; Mezirow, 1991; Scardamalia, Bereiter, 1994). Each facet listed is a characteristic of transformative learning. Clauburg (2004) described transformative learning as the students' ability to engage in learning that is independent guided, involving interactive communication, and revised meanings schemes through critical reflections.

This process of learning is important to the student's educational experience because transformations support change or self-

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Received 16.03.2015 / Accepted 11.04.2015



improvement. This pedagogical interpretation of sports with its multiple perspectives in the reformed syllabuses goes hand in hand with an opening up of content. Besides classic types of sports, topics involving multifaceted cultural exercise activities are categorized into varying fields of exercise. This means that physical education provides specific opportunities for updating educational potential that transcend pure proficiency mediation and are particularly to be found in a didactic interpretation of educational content as well as in a methodical shaping of the mediation process.

Clauburg (2004) suggested that the students' acquisition of knowledge depends on their ability to seek information through research of the course materials provided by the instructor. In evaluating the blended design, it is most suitable for the instructor to design the course in a way that requires the student to direct the learning outcomes. When the student enters the Internet for instruction, the course designer should have the required instructional tools available to enable the students to share what they have learned as well as to explore other ideas presented by others in the course (Muirhead 2004; Perry, Edwards, 2005). The blended course design can present opportunities for the student to experience a process of personal evaluation of the course content along with the ability to establish an interactive voice in the learning process (Smart, Cappel, 2006). As a result of this process, the learner becomes a deliberate director of the instructional experience. The student can investigate how the concepts shared in the course can be applied to real-life settings when the facilitator of learning can present the student with opportunities to share how they perceived the material and how the new information can be applied in a real-world setting. Through this instructional process, the student can experience a learning transformation when the student can take ownership of the learning experience (Meizrow, 1991).

The blended instructional design can support the student in achieving transformative learning outcomes when the student has the opportunity to work collaboratively with peers in a process of discovery of meaning schemes within the course. Students in the blended course can work closely with peers to explore ideas and concepts presented in the reading material. Blended learning is advantageous because learning is not limited to a one-time event in the classroom. For example, blended instruction is an extension of the classroom discussions that encourages further dialogue over Internet protocol to support revised meaning schemes because the course can be designed with discussion boards, chat sessions, e-mail, and web logs (Smart, Cappel, 2006; Picciano, 2002).

Learning continues when all students convene in an on-line environment to explore concepts and ideas shared in the classroom and the virtual environment. When incorporating the best instructional design, students can actively engage in learning that will be meaningful to them educationally and personally.

A transformative learning approach in a blended instructional design can be the optimal way to attempt to instruct students. Student involvement can be increased when the student has opportunities to expand on the shared ideas in the classroom and to delve deeper into the application process in the Internet setting (Smart, Cappel, 2006). In the virtual environment, the student can become responsible for building knowledge in the educational experience. Students gain the benefit of extended time to reflect on the course discussions in and out of the classroom as part of directing their learning process.

Superficial knowledge is stressed as opposed to knowledge-in-action which emphasizes understanding the meaning and the way of a particular content. Knowledge-in-action stresses critical thinking on the part of the students and allows opportunities for students to understand the content's deeper meaning. Traditions, meaning the handing down of statements, beliefs, legends, and customs can provide students tools with which to understand various experiences and use that understanding to learn from the past to better the future.

Transformative learning has been achieved when the student becomes the owner of the learning outcomes in the Internet environment.

Mezirow (1991) suggested that observable personal and philosophical ideas are shared by the student when a learning transformation has occurred. So, the desired outcome expected for students experiencing the blended course design is for them to share practical applications of the content and course discussions in the virtual learning environment resulting in a transformation of knowledge, which in turn can be put into daily practice by the student. Thus, the purpose of this study was to determine the effectiveness of a blended learning approach on student's satisfaction with faculty of physical education.

Method.

Participants

30 student at the first and second grades the public authority for applied education and training. Equally randomly assigned into two teaching method groups: traditional lecture instruction (TLI), and blended lecture instruction (BLI). Each group received of instruction program for ten weeks, three days in the week. At the beginning and the end of this study, students completed a multiple choice of



students' satisfaction scale. These classes were taught and instructed by the same instructor according to the designed teaching plan throughout the entire course. Participants were randomly assigned into two teaching method groups: traditional lecture instruction (TLI) and blended lecture instruction (BLI). Each group received of instruction program for eight weeks, three days in the week. At the beginning and the end of this study, students completed a 17-item multiple choice of soccer test. In addition, students' satisfactions scale. Each student was asked to give consent to participate in the study and was informed that participation was voluntary.

Course Context

The course under study purpose was to introduce students to the fundamentals of multimedia design. The course provided students with the fundamental skills and knowledge to define a problem and design a multimedia application to solve it, to understand and recognize the characteristics of good multimedia design, to begin to use and apply popular multimedia development tools, and to work as part of a team to produce a workable multimedia solution.

Specifically, students in both environments (TLI, BLI) were required to build a prototype of their multimedia application in the end stage of this course. In particular, each student was asked to assume the knowledge skills in soccer, and to prepare a video presentation aimed at introducing to the lecture as a specific physical activity. In the first 10-minutes of each class, the teacher lectured on the guidelines or mistakes and bugs of the video presentation frames. Then, the students had 35-minutes to discuss with their team members about how to implement what they learned.

When the online classes were delivered, students could synchronously discuss and collaborate on the construction of their video presentations through online messenger and chat room. They could also asynchronously interact with team members in their exclusive forums. Moreover, when the classes were delivered in the classroom, students discussed and assigned their tasks in this physical learning environment. Students had to reconsider and modify the prototypes of their video presentations according to the new knowledge they had just acquired.

In this experiment, the instructor initiated students in the TLI and BLI in the field of multimedia application development, planning and creation. The use of a course management system (open e-Class platform) environment was the main difference between the two groups. The amount of material covered in the blended learning course, and the depth with which it is covered, was in general equal that of a classroom face-to-face course.

Satisfaction Scale

One of the most widely used student feedback questionnaires in the education field is the Student Evaluation of Educational Quality (SEEQ) (Marsh, 1982). The SEEQ is not based on student learning research but on psychometric analysis. Survey to measure teaching effectiveness. The SEEQ is multi-dimensional in design, measuring nine Factors related to teaching effectiveness: (a) Learning / Value, (b) Instructor Enthusiasm, (c) Organization / Clarity, (d) Group Interaction, (e) Individual Rapport, (f) Breadth of Coverage, (g) Examinations / Grading, (h) Assignments / Readings, and (i) Workload / Difficulty. Additionally, the SEEQ used in this study included a 10th Factor, Student Evaluations of Teachers, used to measure participants' reaction to students evaluating teachers using a 5-point Likert scale with the following variables: strongly agree = 5, agree = 4, neutral = 3, disagree = 2, and strongly disagree = 1.

Concurrently, from 1978 through 1982, students at the University of Southern California completed over 250,000 SEEQs in over 24,000 courses (Marsh & Hocevar, 1990). Data from these studies indicated that students in both feedback and no-feedback groups were similar to pre-test achievement scores and midterm evaluations of their instructors. Instructors receiving midterm feedback consisting of SEEQ data earned higher end-of-term SEEQ scores as compared to instructors who did not receive the midterm SEEQ data. Also, students earned higher scores on standardized final exams and scored higher on affective outcome scales if their instructors received midterm SEEQ data. It is appropriate to analyse SEEQ data by comparing class-average scores for the SEEQs factors based upon the total group and those based on each separate group (Marsh & Hocevar, 1990). The current study compares class-average scores of the SEEQs factors based upon the total sample of students and upon individual classes of students.

The researcher modified the SEEQ and translated it to Arabic language and discover the validity and reliability in pilot study, SEEQ has an exceptionally high level of reliability (Cronbach's alpha from 0.90 to 0.98). It also has a reasonable level of validity in that scale scores correlate significantly with a wide range of measures of learning outcome such as student marks on standardized examinations, student feelings of mastery of course content, plans to apply skills learnt on the course and plans to pursue the subject further.

Cognitive test

Cognitive testing refers to tests that measure performance, if the work of the individual in the

area of sports training, it is not uncommon to be able to set up multiple forms of cognitive tests associated with the nature of the types of sporting activity practiced, in order to learn the technical aspects of the information obtained and collated by the cognitive test that may help determine the individual cognitive tests, and facilitate planning to develop successful programs for players.

There is no doubt that the knowledge test was prepared with good accuracy, bearing fruit which was designed and for which, as he gained coaching experience in building cognitive tests — which may be a test of cognitive skill – the lack of difficulty of the performance of the coach for his work at cognitive tests requires sufficient time and well planned, so that the test is not intended to be provided with sufficient time for its preparation does not bear fruit that was designed for. Knowledge is the most complex levels in the Division, where he plays a major role to remember for the rest of the levels of perceived to begin behavior that is more complex and trial includes recovery of generalities and specificities.

The researcher with the preparation of the test including the number 40 questions the student answer to each question is Yes or no, and complement the missing sentence

Cognitive goals in sport:

Results.

Table 1. Mean \pm SD and T sign between pre measurements and post measurements in SEEQ factors and Cognitive test for the traditional lecture instruction (TLI) group

No.	Variables	Pre		Post		Change %	T Sign
		Mean	\pm SD	Mean	\pm SD		
1	Learning / Value	15.12	2.11	17.25	2.64	14.09	Sign
2	Instructor Enthusiasm	14.16	2.36	18.91	2.87	33.55	Sign
3	Organization / Clarity	16.35	2.15	18.88	3.55	7.06	No Sign
4	Group Interaction	17.90	1.99	21.04	3.47	17.54	Sign
5	Individual Rapport	14.09	3.05	16.44	3.55	16.68	No Sign
6	Breadth of Coverage	14.36	3.12	15.29	2.91	6.48	No Sign
7	Examinations / Grading	15.17	2.88	18.36	3.72	21.03	Sign
8	Assignments / Readings	14.22	2.41	17.83	2.81	25.39	Sign
9	Workload / Difficulty	13.72	2.01	15.45	3.13	12.61	No Sign
Total		15.01	2.65	17.67	5.92	17.72	Sign
Cognitive test		22.50	5.37	28.86	6.25	28.27	Sign

Table. One shows that there are significant differences between responses pre measurements and post measurements in learning / value, instructor enthusiasm, group interaction, examinations / grading, assignments / readings and the SEEQ total. In addition, no significant differences between responses pre measurements and post measurements in organization / clarity, individual rapport, breadth of coverage and workload / difficulty. The improvement rate between 7.06% to 33.55% with average 17.72%. Adding there are significant differences between responses pre measurements and post measurements in all questions of Cognitive test. The improvement rate is 28.27%.

- Learn the history of sports heroes.
- Knowledge of mathematical concepts and terms in soccer
- Knowledge performance art movement in soccer
- Know the laws and rules of play in soccer.
- Learn offensive and defensive line in soccer
- Know security and safety rules to avoid injuries in soccer
- Know the general health information.
- Know the fitness for soccer.
- Social values gained from practice as well as behavior.
- Learn soccer skills

Statistical Analysis.

All statistical analyses were calculated by the SPSS statistical package. The results are reported as means and standard deviations (SD). Differences between two groups were reported as mean difference \pm 95% confidence intervals (mean diff \pm 95% CI). Student's t-test for independent samples was used to determine the differences in parameters between the two groups. The $P < 0.05$ was considered as statistically significant.

Table 2. Mean \pm SD and T sign between pre measurements and post measurements in SEEQ factors and Cognitive test for the blended lecture instruction (BLI) group

No.	Variables	Pre		Post		Change %	T Sign
		Mean	\pm SD	Mean	\pm SD		
1	Learning / Value	15.64	2.76	22.36	2.81	42.97	Sign
2	Instructor Enthusiasm	15.55	2.58	23.45	2.73	50.80	Sign
3	Organization / Clarity	14.98	2.22	19.91	3.01	32.91	Sign
4	Group Interaction	18.02	2.36	25.25	3.11	40.12	Sign
5	Individual Rapport	14.15	2.89	18.69	2.68	32.08	Sign
6	Breadth of Coverage	15.22	3.11	21.05	2.86	38.30	Sign
7	Examinations / Grading	14.96	2.75	19.34	2.55	29.28	Sign
8	Assignments / Readings	16.02	2.96	22.67	2.71	41.51	Sign
9	Workload / Difficulty	14.11	2.77	19.99	2.94	41.67	Sign
Total		15.41	2.88	21.41	2.99	38.95	Sign
Cognitive test		23.15	5.47	36.27	6.24	56.67	Sign

Table 2 Shows that there are significant differences between responses pre measurements and post measurements in all SEEQ factors. In addition, the improvement rate between 7.06% to 33.55% to average 17.72%. Adding there are significant differences between responses pre measurements and post measurements in all questions of Cognitive test. The improvement rate is 28.27%.

Table 3. Mean \pm SD and T sign between post measurements in SEEQ factors and Cognitive test for the traditional lecture instruction (TLI) group and blended lecture instruction (BLI) group

No.	Variables	TLI group		BLI group		T Sign
		Mean	\pm SD	Mean	\pm SD	
1	Learning / Value	17.25	2.64	22.36	2.81	Sign
2	Instructor Enthusiasm	18.91	2.87	23.45	2.73	Sign
3	Organization / Clarity	18.88	3.55	19.91	3.01	No Sign
4	Group Interaction	21.04	3.47	25.25	3.11	Sign
5	Individual Rapport	16.44	3.55	18.69	2.68	No Sign
6	Breadth of Coverage	15.29	2.91	21.05	2.86	Sign
7	Examinations / Grading	18.36	3.72	19.34	2.55	No Sign
8	Assignments / Readings	17.83	2.81	22.67	2.71	Sign
9	Workload / Difficulty	15.45	3.13	19.99	2.94	Sign
Total		17.67	5.92	21.41	2.99	Sign
Cognitive test		28.86	6.25	36.27	6.24	Sign

Table 3 Shows that there are significant differences between responses traditional lecture instruction (TLI) group and blended lecture instruction (BLI) group fall SEEQ factors except Organization / Clarity, Individual Rapport and Examinations / Grading.

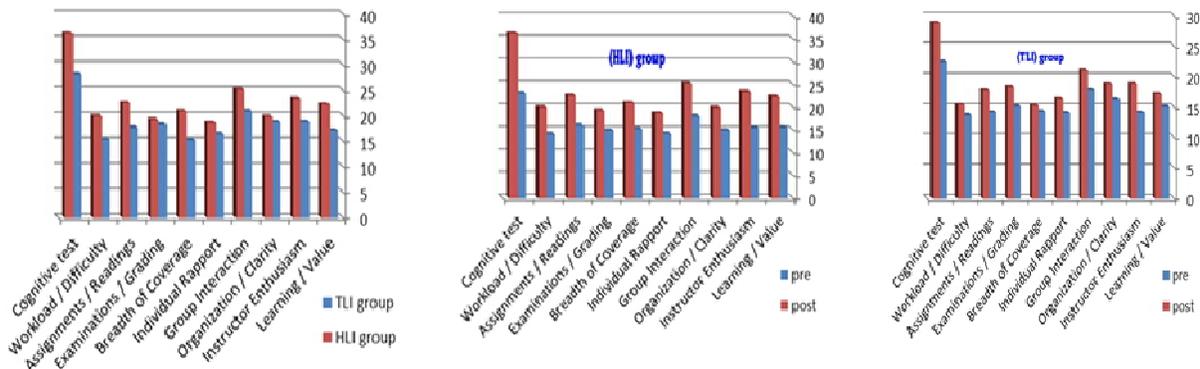


Fig 1 explain the differences in SEEQ factors and Cognitive test to the traditional lecture instruction (TLI) group and blended lecture instruction (BLI) group



Discussion

Blended learning seems to improve students' learning experience by developing their capacity for reflection (Cooner, 2010). Furthermore blended learning enables the student to become more involved in the learning process (Wang, et al. 2009). Blended learning and blended learning are two terms that have been used synonymously (So & Brush, 2008).

According to (Nikolaos, et al. 2012) Blended learning is thus a flexible approach to course design that supports the merger of different times and places of learning, offering some of the convenience of fully online courses without the complete loss of face-to-face contact. This is one of the reasons that blended learning courses have been well-received (Melton, et al., 2009). Other advantages obtained include its greater flexibility (Macedo-Rouet, et al., 2009) and reduced costs (Nikolaos, et al. 2011) in comparison to traditional classes (Woltering, et al., 2009), especially when large classes are involved.

Blended learning can be delivered in a variety of ways. A common model is the delivery of "theory" content by e-learning prior to actual attendance at a training course or program to put the "theory" into practice. This can be a very efficient and effective method of delivery, particularly if travel and accommodation costs are involved. This mixture of methods reflects the blended nature of the training. (Stockley, 2005)

While research recognized a number of advantages in employing blended learning, insufficient learning satisfaction has long been an obstacle to the successful adoption of this new educational approach (So & Brush, 2008). Therefore, more research has centred on student satisfaction with this type of learning (Melton, et al., 2009). Student satisfaction is defined, as "the student's perceived value of his or her educational experiences at an educational institution" (Astin, 1993). The degree of student learning satisfaction with blended learning courses plays an important role in evaluating the effectiveness of blended learning adoption. Hence, comprehending the essentials of what determines student-learning satisfaction can provide management insight into developing effective strategies that will allow educational institution administrators and instructors to create new educational benefits and value for their students (Wu, et al., 2010).

Student satisfaction is one of the five pillars of quality, together with faculty satisfaction, learning effectiveness, access, and institutional cost-effectiveness (Moore, 2002). Components of the student satisfaction need to be investigated as blended education becomes more prevalent and dynamic forces such as adoption rates, learner

expectations, levels of support, and other conditions continue to change.

Many studies have found students in online classes to be less satisfied with their course experiences as compared to their traditional, face-to-face colleagues (McFarland & Hamilton, 2005; Roach & Lemasters, 2006) and still others have reported online students to be significantly more positive in their evaluations (Kleinman & Entin, 2002; Iverson, et al., 2005). However, much of the research literature has focused on comparing student satisfaction in face-to-face and online environments, or face-to-face and computer-mediated environments.

This results was fairly consistent with other studies in the literature which seem to indicate that student satisfaction and success rates in blended courses was equivalent (Larson & Chung-Hsien, 2009) or slightly superior to traditional courses (Melton, et al., 2009). In addition, 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 blended course model (Riffel & Sibley, 2005). And not Constance with (Larson & Chung-Hsien, 2009) who conducted a comparison of three delivery modes (traditional, blended, and online) using student exams and final grades. The results reported that despite the delivery mode there was no significant difference regarding student satisfaction, learning effectiveness, and faculty satisfaction.

Conclusion

In conclusion, this study has revealed that blended learning for eight weeks could enhance the cognitive test and could increase student satisfaction for physical education students.

Acknowledgments

Thank you to all of our participants of research.

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