A Study of Student's Perceptions of Blended Learning in certificate courses of Gulf Medical University

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ABSTRACT

Objective: Estimate students' perception of blended learning and ease of use of online content in blended learning courses and to correlate the perceptions with socio demographic variables.

Materials and Methods: This cross sectional study was conducted at the Center for Continuing Education and Community Outreach (CCE&CO), Gulf Medical University during the period Jan 2013-Dec 2013.Student perceptions of blended learning process, content and ease of use were recorded from a total of 75 students enrolled in the certificate courses offered by CCE&CO using a questionnaire. Mann-Whitney-U-test was performed to see whether the gender affected the students' perceptions of blended learning. Kruskal- Wallis test was used to assess if perceptions differ significantly across different age categories and course of study.

Results: The median scores of all the questions in all three domains of perception were above 3 indicating positive perceptions of students regarding the process of blended learning, the blended learning content and the ease of use of online content. The distribution of perceptions regarding all 3 domains was the same across categories of gender and age. There was a significant difference in the distribution of perceptions across the different course of study the student was enrolled in.

Conclusion: Students hold a positive perception of the blended learning courses being offered in GMU. The difference in perceptions among students of different courses indicates that the blended learning format offered needs modification according to course content to improve its perception.

Keywords: Blended learning, online learning, student perceptions

INTRODUCTION

Internet based technologies and other advanced computer software are being widely adopted to deliver educational elements of different courses to students who are placed in an environment remote from the instructor. These e-learning possibilities have enhanced the opportunities and posed challenges to education. Major hindrances faced, like limited teacher student interactions, limited interaction amongst peers, communication problems and insufficient sense of bonding between teacher and the student have led to the adoption of "hybrid learning" or "blended learning"[1].

Blended learning is defined as "a way of meeting the challenges of tailoring learning and development to the needs of individuals by integrating the innovative and technological advances offered by online learning with the interaction and participation offered in the best of traditional learning"[2].

E-learning platforms like Modular Object-Oriented Dynamic Learning Environment (Moodle), are used to develop courses offering blended learning experience. This form of learning environment caters to the needs of students who are not in a position to attend traditional contact classes due to personal or professional reasons. It also provides an opportunity to meet the instructor and avoid a completely impersonal course experience as in the case of a course offering purely E-learning. "Blended learning is the organic integration of thoughtfully selected and complementary face-to-face and online approaches and technologies"[3] .Studies have reported similar or better learning outcomes in students in blended learning environment when compared to students in traditional learning environments[4,5] .

The blended learning environments no doubt face problems which could be impediments to their further growth. Instructors of such courses state the administration of courses to be time consuming while the students often experience frustration due to lack of communication and technological problems[6]. All these result in high dropout rates[7].

Students' satisfaction is the most important factor for the success of blended learning[8]. Insufficient student satisfaction is the major obstacle to successful implementation of blended courses[9]. Evaluation of the success of such courses largely rely on attitudes of students', their expectations and finally their satisfaction[1].

The feedback of students who are among the key stake holders is absolutely essential to ensure a successful implementation of any teaching learning methodology. This study was conducted with an aim of determining students' perception of the process and content of blended learning courses as to ensure prompt corrections that can be made to the entire system which will go a long way to enhance student learning and decrease dropout rates in these courses.

MATERIALS & METHODS

Study population

This cross sectional study was conducted at the Center for Continuing Education and Community Outreach (CCE & CO), Gulf Medical University. The CCE&CO, through its outreach programs provides noncredit and credit-based instructional programs for individuals, organizations, and businesses in the health sector. A variety of instructional methods, including blended learning are employed in diversified programs used for people of all ages. All the Students enrolled in certificate courses employing blended learning conducted by the CCE&CO from Jan 2013-December 2013 and willing to participate in the study were included in the study

The blended courses

The certificate courses provided by the CCE & CO incorporated a blend of varying degree of online component and contact sessions. While the duration of courses offered varied from 3 weeks to 10 months, they all used MOODLE to administer the online course content hence providing self-paced learning time and a major reduction in classroom lecture time. Online component was provided on weekly basis and included course description, course schedule, course content, announcements, discussion forums, reading links and assignments. Contact sessions of 3 hours were scheduled at the end of every week, where the learners had the opportunity to meet each other and the instructor. In the introductory session students were presented with all the information they need to know about working online. Students were expected to log onto the course individually whenever convenient, and read that week's course material, download resources and follow instructions to complete tasks. Assignments, quizzes and self-evaluation questions with timely feedback were provided online. Students were provided with feedback and correction weekly. Students could interact with the instructor and with each other over discussion forums. Students were evaluated on the basis of their participation in course work and also their performance in assignments and end of course exam.

Study instrument & validation procedure

A questionnaire was designed by the researchers and validated by two experts in medical education. Statements in the questionnaire were categorized into three main domains. The first 10 items identify the students' perception of BL process. The next 9 items identified the students' perception of the BL content. The rest 5 of the items, are related to the domain of students' perceived ease of use of computers and Moodle. The scoring for the questionnaire was established as follows following the five point Likert scale: Strongly Agree: score of 4 points; Agree: score of 3 points; Neutral: score of 2 points; Disagree score of: 1 point and; Strongly Disagree: score of 0. Negative items had their scoring reversed. Other variables recorded were age, gender and course of study. The alpha reliability coefficient of the scale was found as .87 indicating that the instrument was reliable. Table (1) clarifies the coefficient values of the questionnaire

Table 1: Reliability Coefficients (Alpha) of the questionnaire

Domain	Cronbach's alpha
1.Perception of blended learning process	0.799
2.Perception of the blended learning content	0.766
3.Perceived ease of use of computers and Moodle	0.724
4.All three domains	0.873

Data collection process

Data collection was initiated after approval from ethics and research committees of Gulf Medical University. Informed consent was obtained from the participants. Participant anonymity was maintained. Questionnaires were distributed amongst the target population at the end of individual courses. The completed questionnaires were collected for data analysis.

Data analysis

Data was fed into Excel spreadsheet for statistical analysis. Data analysis was performed using SPSS-21. The students' perception of the three domains (process of blended learning, content of blended learning and ease of use of computers & Moodle) was analyzed in terms of the median score and interquartile range of its individual items. Negative items in the questionnaire were coded reverse. The Mean score for individual items in the questionnaire score of (2) was considered as a reference value for analyzing the perceptions. Score over (2) was considered positive while those below (2) as negative. Mann- Whitney- U- test was performed to see whether the gender affected the students' perceptions of blended learning. Kruska-Wallis test was used to assess if perceptions differ across different age categories and course of study.

RESULTS

Demographics

A total of 18 (24%) of the students were male and 57 were female (76%). The age of the participants ranged from 17-58 yrs. The percentage distribution of participants according to age is represented in figure 1.
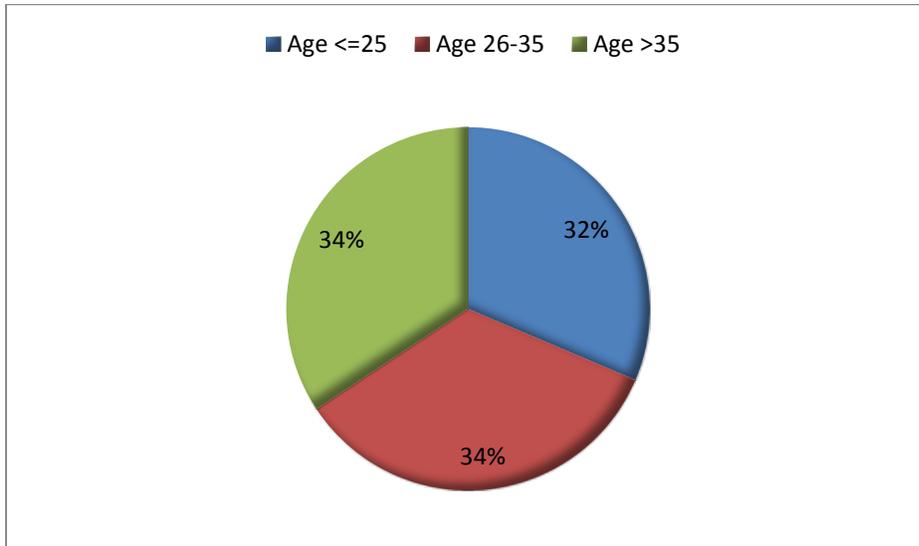
Figure 1: Age (n=70)

Figure 2 shows the percentage distribution of study participants enrolled in different courses of CCE & CO.
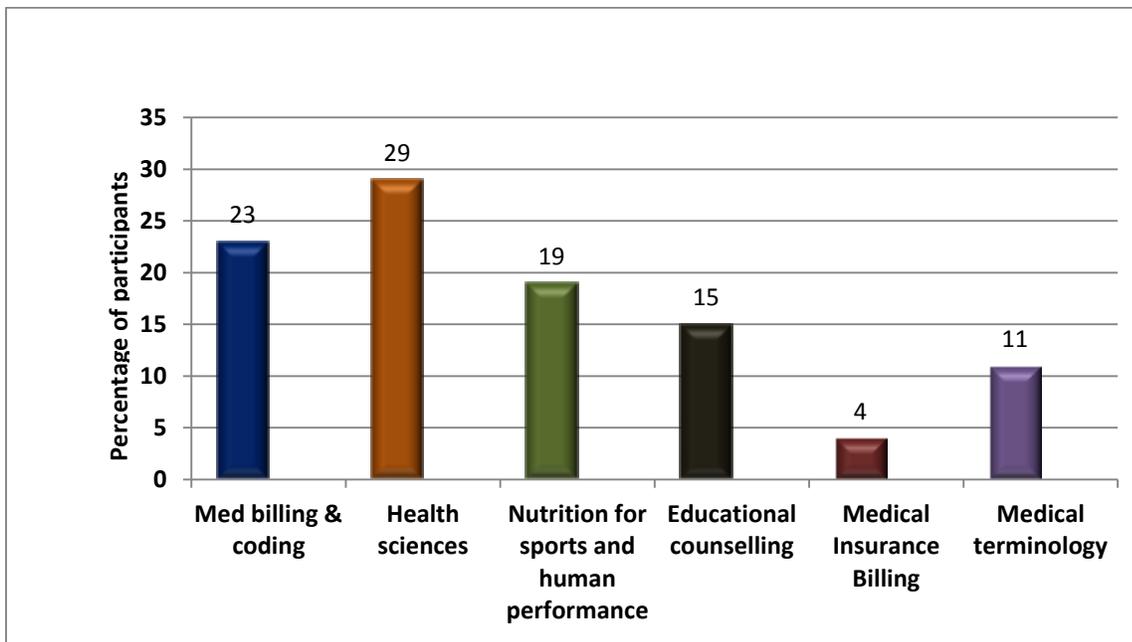

Figure 2: Course of enrollment

The students' perceptions are presented in the figures 3, 4, & 5.

The median scores of all individual statements were greater than 2 indicating positive perceptions. The negatively framed questions were coded opposite.
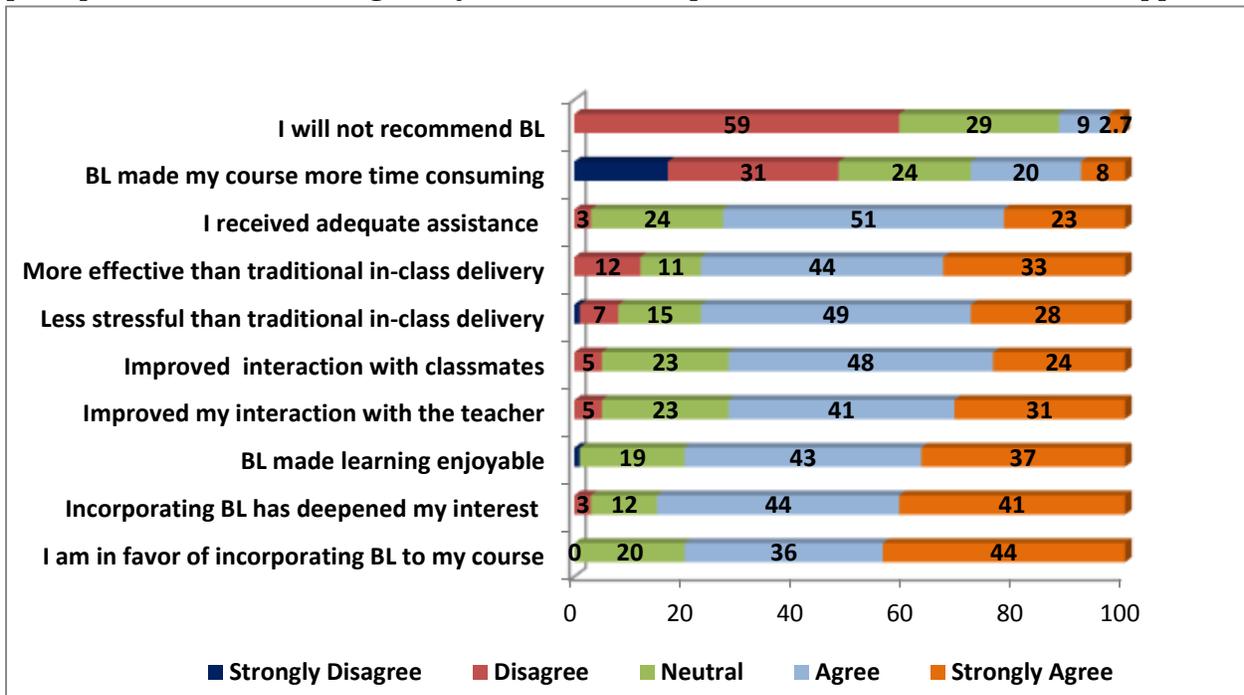

Figure 3: Frequency distribution of perceptions of blended learning process
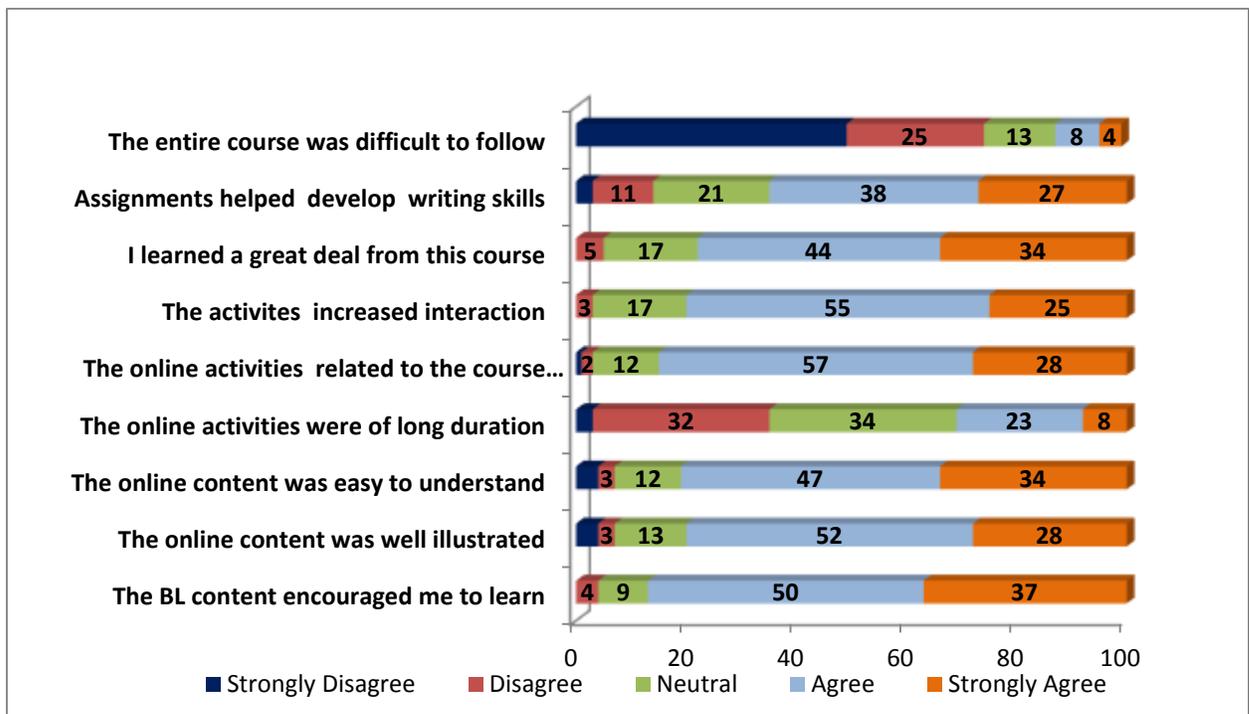

Figure 4: Frequency distribution of perceptions of blended learning content
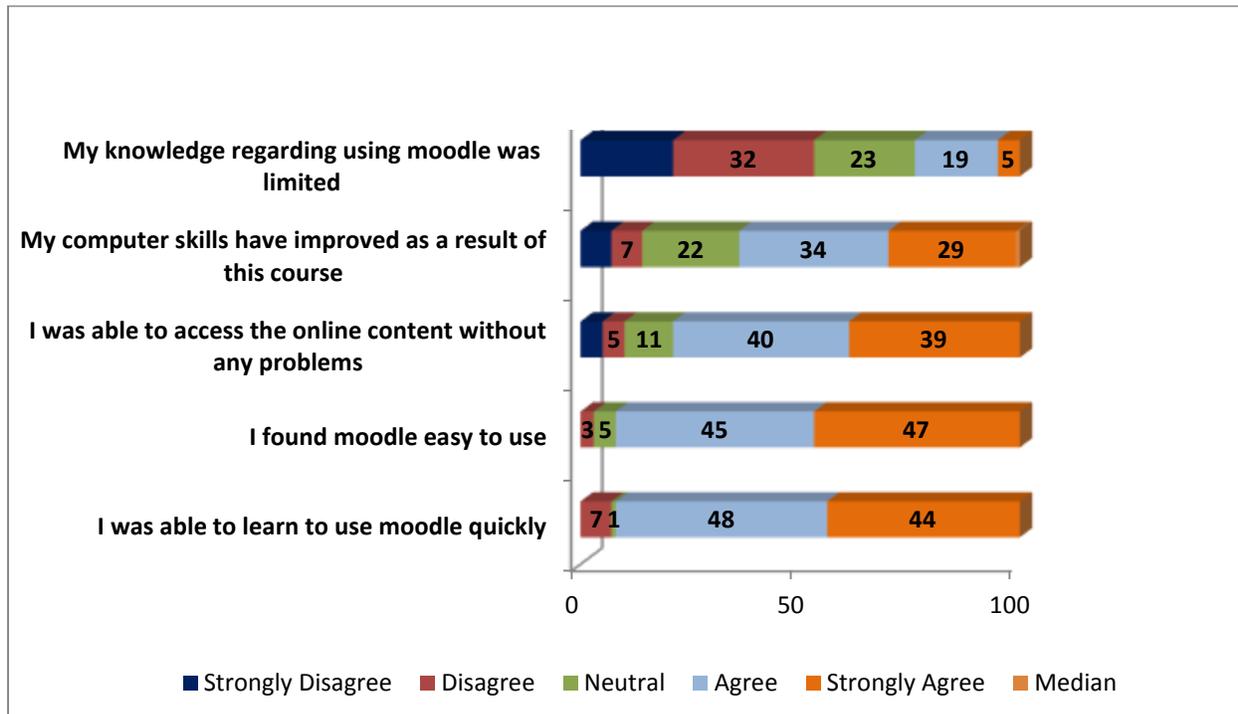
Figure 5: Frequency distribution of perceptions of ease of use

Differences in Perceptions Based on Demographic Factors

Gender:

There were no scores in the first quartile of all three domains (BL process 1-10; BL content 1-9; Ease of use: 1-5) in both the genders. Mann-Whitney-U-test showed that the distribution of perceptions regarding all 3 domains was the same across categories of gender.

Age:

Kruskal-Wallis test revealed that the distribution of perceptions regarding all 3 domains was the same across age categories.

Course of enrollment:

Distribution of student perceptions according to course of enrollment is shown in figure 6. Kruskal-Wallis test revealed that that the distribution of total perception scores as well as individual domain scores were significantly different across the different course of study the students were enrolled.
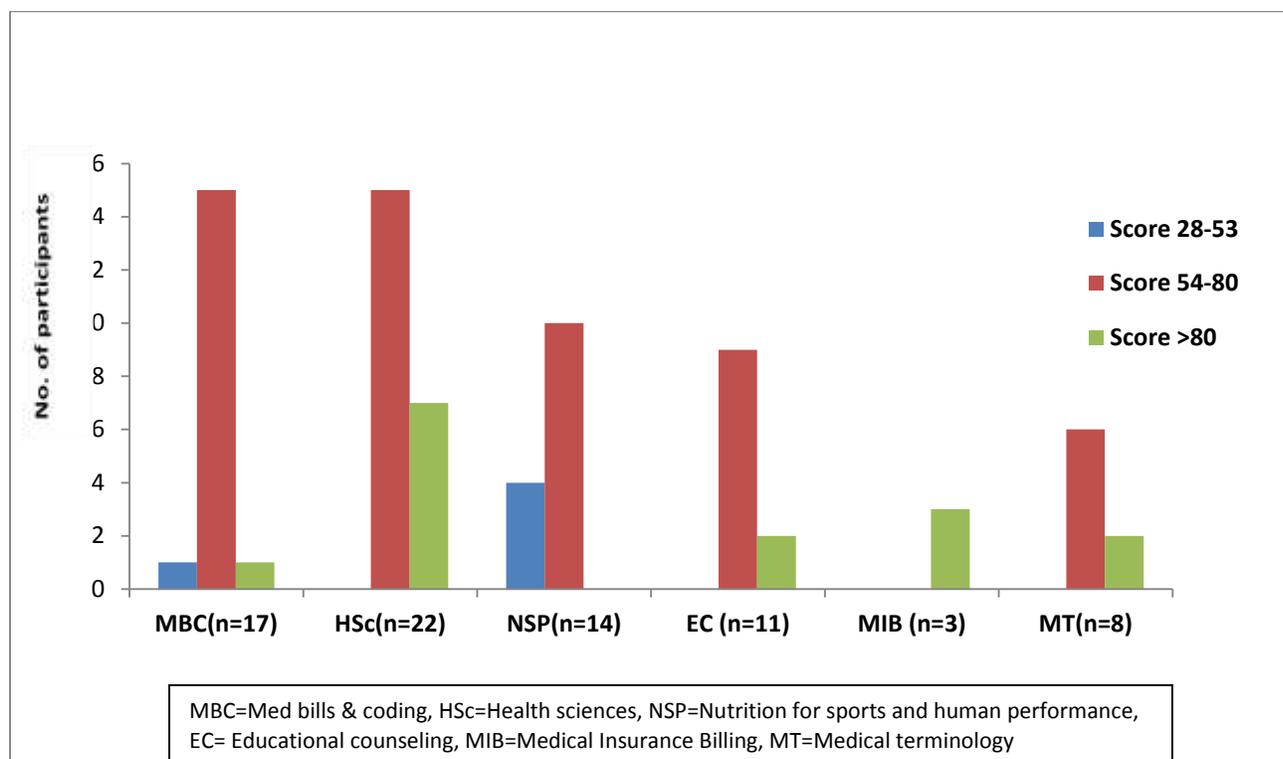
Figure 6: Distribution of total perception scores across different courses of enrollment

DISCUSSION

Examined in this study is students' perceptions of blended learning at a university that is implementing a major blended learning initiative.

With respect to the perception of blended learning process, participants of this study perceive BL to be less stressful and more effective than traditional in-class delivery.

Our results are in alignment with the literature reporting that students show greater satisfaction in blended courses than in traditional lectures .[10]

Students at GMU are of the opinion that BL improved their interaction with the teacher and classmates. The relationship of student interaction with blended learning was also found in DeLacey and Leonard's study, as they reported that students not only learned more when online sessions were added to traditional courses, but that student interaction and satisfaction improved as well.[11] Supporting this view, So and Brush state that integrating online sessions with traditional courses improve student interaction and satisfaction[12].

Support for students and faculty is a key component of blended learning. Technology training and support should be available for students and faculty. [13]The IT support facilities in GMU, according to the findings of the study seem to be efficient enough for the students to perceive the support facilities as adequate.

Interest must be present in the classroom to satisfy an individual's intellectual and personal needs and is fostered by providing an individual with a variety of educational opportunities that promote his or her involvement[14]. The blended learning environment

offered at GMU is found to help deepen student interest in the subject matter and encourage them to learn.

Perception of blended learning content:

Students perceive that presenting the course in blended format made it easy to follow and enhanced their learning. The online content was well illustrated and easy to understand .The online activities increased interactions and were well framed with regards to their objectives and duration. It is of importance that the intended learning objectives of the course correspond with the online activities so as to ensure a connection between the two components[15]. Blended learning requires an intentional approach to instructional design so that the program is blended in design, not just in delivery.

Perceived ease of use of Moodle:

Access to technology is one of the most important factors influencing student satisfaction[16]. Not only should the equipment be reliable but also the students should be familiar with its usage. BL courses offered at GMU employ Modular Object-Oriented Dynamic Learning Environment (Moodle) which is a learning platform designed to provide educators and learners with a single robust, secure and integrated system to create personalized learning environments. The students enrolled in BL courses are given training for the use of same before commencement of the course. Students hence perceived Moodle to be user friendly. Also contributing to this positive perception was the fact that majority of the students had good computer skills to start with. It is important to emphasize here that when online environments are designed in a way that is feasible and easy to use, learners will be encouraged to get engaged in the activities and eventually learn better.

Correlation between students' attitudes and the variables of gender and the enrolled course

Age and Student perceptions:

Present study shows no correlation between age and student perceptions of BL.   This appears to be somewhat in-line with previous research that did not show any correlation between student satisfaction and student background characteristics such as age, gender and computer expertise[17]. So (2009) on the contrary reported that student satisfaction levels were positively related to age (with the older students being more satisfied with the course than younger students[18].

Gender and Student perceptions:

No differences were noted in the student perceptions of BL with regards to gender in this study. Similar findings were reported by Shehab (2007) :Adas and Abu Samais, (2011) with no significant differences in terms of gender even though the highest means were in favor of the females[19,20]. However, Al-Fadhli reported a strong significance in students' attitudes toward e-learning in accordance with their gender. Female students' mean scores outscored their male counterparts[21]. Other researchers contended that males liked the Blended Learning component more than the females[22]. Meyer interestingly, found that

gender differences appear in online exchanges just as they would in regular situations. Males were more likely to control online discussions, posed more questions, expressed more certainty in their opinions and were more concrete, whereas females were more empathetic, polite and agreeable[23].

Enrolled course and Student perceptions:

While the overall perceptions of students belonging to different courses remain positive there is a significant difference in the distribution of perceptions according to the course of study. This could be explained by the fact that the blended model of learning is not a one-size-fits-all solution, but is something that must continually evolve to meet learning needs [24]. Blended learning designs differ according to the objectives of the courses, the percentage of different components and the degree of blending of the components. While designing the course it is very crucial to select the right elements that cope with the objectives of a blended course. What works for one course may not work for the other. As Garrison and Kanuka state, "blended learning is inherently about rethinking and redesigning the teaching and learning relationship[3].

Quite contrary to our finding, a study conducted at the Al-Quds Open University, Palestine concluded that there are no significant differences between the means of learners' responses due to their belonging to a program or another[25]. The authors concluded that the learners belonging to five different programs had already participated in blended learning before making them familiar and highly motivated towards blended learning.

CONCLUSION

Students of blended learning courses have a positive perception of the process and content of blended learning. They perceive Moodle to be easy to use. GMU learners' age and gender were not significant factors impacting their perceptions of BL. Perceptions of BL differed between learners due to their course of study

SIGNIFICANCE OF THE STUDY

Student satisfaction is important and needs to be continuously assessed to assure quality of learning experiences for students. Satisfied students are more motivated and committed and hence, better learners than their dissatisfied counterparts. Research on student satisfaction with blended learning is essential to ensure that high quality learning is achieved in a scenario where their instructor and students are physically separate. The finding of this study will help the educator and policy makers in developing strategies which extend the quality assurance framework to support the approach of blended learning.

LIMITATIONS

This study focused on undergraduate students in GMU taking blended learning courses. Though the results are valid they cannot be generalized to other institutions. In addition, the study used a self-reported questionnaire survey form which is limited in nature by the accuracy of the participant's response.

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