ORIGINAL ARTICLE

Perceptions of Undergraduate Dental Students towards E-Learning in Lahore Medical and Dental College

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ABSTRACT

Aim: To analyse the perceptions of undergraduate dental students of Lahore Medical and Dental College towards e-learning, and difference in perception of gender.
Study design: Quantitative cross sectional study
Methods: Conducted on 280 dental students resulting in a 92% response rate to the adapted questionnaire. Its reliability was examined using Cronbach's alpha. Data were entered in SPSS 20 and results show that respondents have high perceptions towards e-learning.
Results: Distance learning gets the highest score, indicating the potential scope of e-learning on improving and impacting distance learning opportunities. Comparison of responses of students in different academic years shows that students perceive the usefulness of e-learning differently as they progress through their studies (P=0.021), and no significant difference was found in the perception of genders.
Conclusion: The positive perception and the willingness of students towards e-learning suggested that future e-learning initiatives have great potential in Lahore Medical and Dental College.
Keywords: E-learning, Undergraduate dental students, Perception.

INTRODUCTION

Electronic learning (e-learning) is changing the teaching and learning ways[1]. Recently e-learning define as "the delivery of course content via electronic media, such as internet, intranet, extranets, satellite broadcast, audio/video tape, interactive TV, and CD-ROM[2].

E-learning modalities, which may be used in medical, dental, nursing or any other health related undergraduate curriculum are asynchronous audio or video: Blended Learning, Chat / Video Conference, E-portfolio, Online Discussions Forums, Online collaboration (Wikis, Blogs and Interactive White boards, Virtual Learning Environment (VLE)[3].

In higher education the major driving forces behind online access to learning contents are the changing demographic factors of the students, changing conditions for education delivery and the innovation in technology itself. To keep pace with the changing trends, educational systems are in the process of integrating ICTs to increase the students learning experience[4]. Adopting e-learning modalities can solve learning and performance problems, reduce faculty workload, whereas other institutions are hopping onto the bandwagon just because they do not want to be left behind[5]. Understanding the

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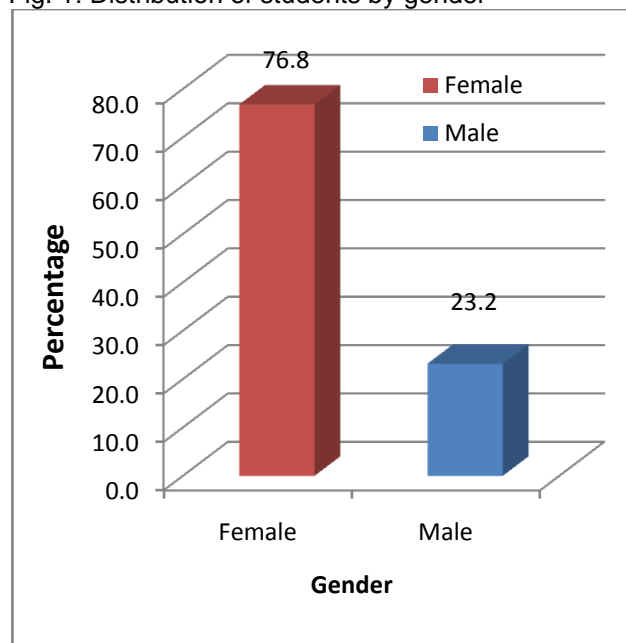Correspondence to Dr. Sadia Iqbal. E-mail: iqsadia@yahoo.com
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perceptions of users is very much important as the technology considered useful in one environment may not be considered the same in other. Many universities start adopting e-learning techniques such as Learning Management Systems (LMS) and video conferencing as an alternative to conventional education. in order to compete with international educational standards Pakistan has to go a long way to get the benefits of e-learning.

Before adoption, the most important step is how teachers and students perceive e-learning and web based technologies. Taking account of these facts this study was carried out to investigate the perception of e-learning of under graduates' dental students of Lahore medical and dental College.

METHODOLOGY

A quantitative cross sectional study was done to determine the perceptions of undergraduates 'students of dentistry at Lahore Medical and Dental College. Adapted questionnaire with five point Likert Scale containing 37 close ended questions has been used. This questionnaire is divided into six domains:
1. Perceived usefulness: (11 items)
2. Readiness of learner: (7 items)
3. Ease of e-learning use: (4 items)
4. Technical support: (7 items)
5. E-learning stressors: (5 items)
6. Distant learning: (3 items)

After compiling the questionnaire, its face and content validity was established through extensive discussions with subject experts, pilot testing was done, and Cronbach's alpha, is also used as the measure of internal consistency. A pilot study was used to pre-test the questionnaire among the sample of 8 students from the second year BDS class and not included in the main study. 280 participants filled out the questionnaire resulting in a 92.1% response rate in 2 rounds. Data were entered in SPSS 20 and results were analysed.

RESULTS

In this study total 280 students from dental section of Lahore Medical and Dental College gave response to the questionnaire on perceptions about e-learning. Out of 280 students, 75(26.8%) students were from 1st year, 80(28.6%) students were from 2nd year class, 55(19.6%) students were from 3rd year and 70(25%) students were 4th year class. Majority of the students were female (76.8%). So like most medical colleges in Pakistan, almost three fourth students were females and only one fourth were males.

Fig. 1: Distribution of students by gender

The reliability of the constructs was done using Cronbach's alpha. Table 4.1, shows all values were above of 0.80 which are good.

The results show that respondents of all the academics years have high perceptions towards e-

learning. Distance or online learning gets the highest score (Mean=4.15), indicating the potential scope of e-learning on improving and impacting distance learning opportunities. E-Learning stressors got minimum score indicating the stresses associated with the learning and use of e-learning related technologies.

Table 1: Reliability of the Questionnaire

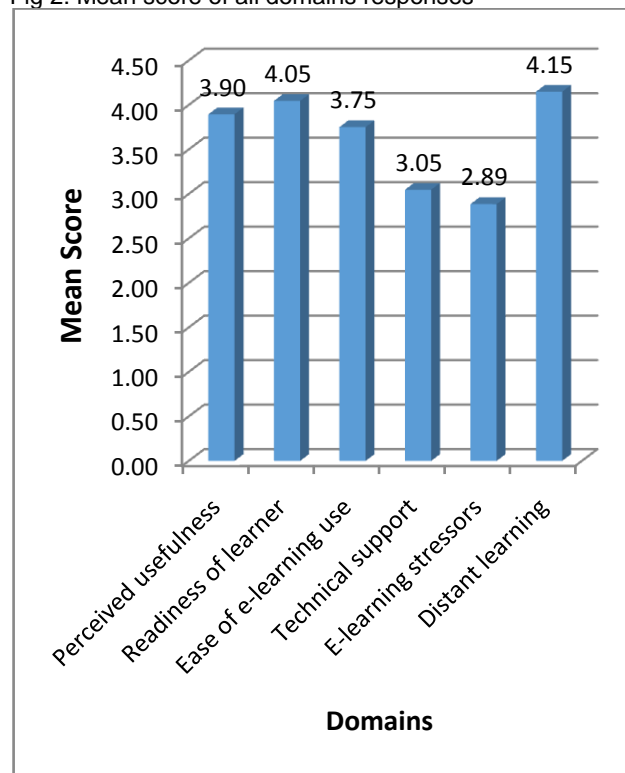| Domains	Items	Cronbach's Alpha
Perceived usefulness	11	0.858
Readiness of learner	7	0.837
Ease of e-learning use	4	0.811
Technical support	7	0.835
E-learning stressors	5	0.887
Distant learning	3	0.86

Fig 2: Mean score of all domains responses

Table shows the mean results for the six domains of e-learning questionnaire were compared for any differences between male and female students. Five domains did not show any statistically significant difference. The only statistically significant difference was see for technical support with males mean value was higher than females (p=0.001).

Table 3: Comparison of all domains responses between male and female students

Domains	Male	Female	p-value
	Mean±SD	Mean±SD	
Perceived usefulness	3.84±0.50	3.91±0.57	0.337
Readiness of learner	4.03±0.51	4.05±0.56	0.745
Ease of e-learning use	3.68±0.86	3.77±0.81	0.408
Technical support	3.14±0.81	2.75±0.90	0.001*
E-learning stressors	2.98±0.80	2.86±0.77	0.273
Distant learning	4.19±0.81	4.14±0.73	0.630

*The mean difference is significant at the 0.05 level.

DISCUSSION

E-learning increases the educational opportunities for students and also enhancing faculty effectiveness and efficiency. For e-learning adoption Institutional readiness ensures the alignment of new tools to the educational and economic context.

The results show that respondents of all the academics years have high perceptions towards e-learning.These findings are comparable with the results of a study conducted in Punjab University in India by Suri and Sharma[6] and a study conducted in the Gulf region by Al-Doub, etal.[7].Another study was conducted at Dow University of Health Sciences by Jawad. In his study he develops a pilot module of e-learning for undergraduate and analyzes the perception of students towards their learning experience. His study proved that students are highly perceived and wants more topics to be covered with e-learning modality[5].

The gender distribution in my study revealed a female majority (77.17%).The results of this questionnaire shows (Table 3) that male and female undergraduate dental students of Lahore Medical and Dental college have same perception about e-learning (p>0.05).A study from India did not show any gender-specific differences[8].Whereas study conducted by Willie C. reported that female had higher acceptance of e-learning systems than those of the male respondents[9].

CONCLUSION

From the results of this study the positive perception and the willingness of students towards e-learning suggested that future e-learning initiatives have great potential in Lahore Medical and Dental College. Regarding gender, this study found that both female and male students had positive perception towards e-learning and also paints a picture that females need more attention for technical support, Internet use, computer skills, Confidence development.

Dentists need to develop electronic research skills because, participate in conferences that are offered via internet and keep abreast with new dental developments that are delivered beyond the face-to-face and paper formats.

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