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**ORIGINAL ARTICLE**

# Student Perception Regarding Efficacy of Online Vs Traditional Campus-Based Teaching and Challenges

HIRA BUTT[1], MAHAM QASIM[2], SAMRA LIAQAT[3], AQSA[4], ZAINAB WAHEED[5], KHADIJA AMJAD[6]
[1]*Demonstrator, Oral Pathology, College of Dentistry, Sharif Medical and Dental College, Lahore*
[2]*General dental practitioner, Faisalabad*
[3]*House officer, Islamic International Dental Hospital, Islamabad*
[4]*General dental practitioner, Lahore*
[5]*Senior lecturer, Department of Psychiatry, Kabir Medical College, Peshawar*
[6]*Demonstrator, Department of health profession education Institute of dentistry, CMH, Lahore, Pakistan*
*Corresponding author: Hira Butt, Email: hira.ah.butt@gmail.com, Cell: 0320-4635376*

## ABSTRACT

To analyze the student`s perception of the effectiveness of online versus campus-based teaching. A descriptive cross-sectional study was conducted on students of Bachelor of Dental Surgery from College of Dentistry, Sharif Medical and Dental College Lahore. Dental students from all four years were included in the study irrespective of their academic records. Students who did not attend the online classes or refused to give consent were excluded from the study sample. A pre-validated questionnaire with a Cronbach alpha of 0.94 was used. The difference in the mean rank score across different student perceptions of the effectiveness of online in comparison to campus-based teaching was significant for motivational problems and time interruptions ($p \leq 0.001$) while non-significant for instructor and personal problems ($p=0.437$), lack of support services ($p=0.942$), lack of pre-requisite skills ($p=0.218$), technical problems ($p=0.238$) and lack of social interaction ($p=0.187$). The difference in the motivational problems and time interruptions across the different student perceptions was significant with the highest mean rank score for students who cannot learn well in online classes as in traditional classes.

**Keywords:** Online learning, campus-based learning, student perception, effectiveness

## INTRODUCTION

Computer advancements, especially in terms of Internet use, have fueled an unparalleled increase in the use of technology-based settings in education. Importantly, both distance-learning and traditional educational institutes have incorporated a variety of digital educational experiences into their curricula, including virtual discussion rooms, podcasting, online models, and tweeter boards. A variety of explanations have been proposed for these changes. Web-based solutions are considered a dramatic advancement in learning since they allow for learning to take place anywhere, at any time, and at a lower cost than traditional methods[1].

Online, or e-based, education, and all non-campus-based education alternatives have long been seen as second-best to classic face-to-face alternatives in academic contexts. Most of the survey on this topic in this field has centered on facts regarding student effectiveness, attrition, and retention, with very little regard for the overall educational experiences, which appreciates both classical learning assessment methods alongside student-centered factors like student contentment with their learning opportunity. According to a study done by Mgutshini, despite their lesser confidence in material proficiency, online students outperformed their face-to-face colleagues on the summative tests. Moreover, online learners said they spent a lot more hours on material mastery and group debates, both of which are linked to improved student results. Significantly, student satisfaction in online courses was greater than in the on-campus programme[2]. Allen and Seaman analyzed the notion that 32 % of all students enrolled had completed at least a single online class in 2011, increasing from 9.6 % in 2002, and that an anticipated 6.7 million learners had attended a course online throughout their educational career reflecting increasing popularity in online programs[3]. But Delaney, J., Johnson analyzed that despite rising online admissions, students also still preferred face-to-face classes[4]. Dost S conducted A cross-sectional study on medical undergraduate students and found that according to student's online education to be neither interesting nor pleasurable, and there were few opportunities for them to ask questions. Moreover, when questioned whether online teaching must be more participatory, students were generally neutral but didn't really believe it was as efficient as face-to-face instruction[5]. The primary benefits of internet-based teaching proved to be because it cuts students' hours on travelling (19.82%), allows for flexibility (19.52%), allows students to study at their preferred schedule (18.63%), is much more convenient (15.84%), and reduces expenses (14.24 %). On the other hand, family disturbances (26.76 %), online connection (21.53 %), lecture time (17.31 %), nervousness (11.08 %), and insufficient resources (11.03 %) were cited by students as hurdles to efficient online education. About 75.99 % of medical graduates believe online training has failed to substitute the clinical learning they obtained via direct patient interaction, and 82.17 % believe students cannot develop practical clinical expertise via online learning. This demonstrates that clinical experiences remain a significant obstacle to medical students learning online. In this study, our aim is to analyze the student's perception of the effectiveness of online versus campus-based teaching.

## METHODOLOGY

A descriptive cross-sectional study was conducted on students of Bachelor of Dental Surgery from College of Dentistry, Sharif Medical and Dental College Lahore. Dental students from all four years were included in the study irrespective of their academic record. Students who did not attend the online classes or refused to give consent were excluded from the study sample. A pre-validated questionnaire with a Cronbach alpha 0.94 was used[6]**.** To the assess the various barriers to online learning faced by the students, item analysis was performed in the pilot study on the 45 variables pertaining to barriers. The Cronbach alpha value after removing certain items in our study was calculated to be 0.934, which resulted in 35 barrier items. The Questionnaire was distributed among 200 dental students at Sharif College of Dentistry, SMDC, after obtaining permission from Sharif Medical Research Center (SMRC). Informed consent was taken prior to data collection. SPSS 23 was used for statistical analysis. All numeric data was presented as mean and its standard deviation. All nominal data was presented as frequency and percentages. Kruskal Wallis test was used to find the difference in the scores of barrier items (factors) across the categories of student perception of effectiveness of online and campus-based teaching. Epsilon square was used to calculate the strength of association between the barriers to online in comparison to campus-based education with the student perception of effectiveness of both methods. P value ≤ 0.05 will be considered significant.

## RESULTS

A cross-sectional descriptive study was conducted on 193 students of all four years of Bachelor of Dental Surgery (BDS) at College of Dentistry, Sharif College of Dentistry, Lahore, Pakistan, out of which 31.6% were males while 67.9% were females. Table 1

shows a statistically non-significant difference in the scores of instructors and personal problems (factor 1) across the different student perceptions of the effectiveness of online and campus-based teaching. It was seen that the highest mean rank score for factor 1 was seen in individuals who reported that they cannot learn well online as in traditional classes. Students with the highest mean rank score for the barrier of lack of support services reporting not experiencing a great difference between the two modalities. The difference in the motivational problems and time interruptions across the different student perceptions was statistically significant with the highest mean rank score being for students who cannot learn well in online classes as in traditional classes as shown in table 1.

Table 1: Difference In The Scores Of Instructors And Personal Problems, Motivational Problems And Lack Of Support Services Across Categories Of Perception Of Student Effectiveness Of Online In Comparison To Campus-Based Teaching

| Barriers to online learning | | N | Mean Rank | Chi-square | P value | Epsilon squared |
|---|---|---|---|---|---|---|
| Instructor and personal problems (Factor 1) | Cannot learn well in online classes as in traditional classes | 124 | 101.42 | 3.77 | 0.43 | 0.017 |
| | Do not see the difference between online and classroom learning | 41 | 86.39 | | | |
| | Learn better through online learning as compared to classroom | 8 | 76.81 | | | |
| | I predict I will not learn well online | 19 | 101.26 | | | |
| | I predict I will learn better online | 1 | 64.00 | | | |
| Motivational problems and time interruptions (Factor 2) | Cannot learn well in online classes as in traditional classes | 124 | 109.00 | 22.07 | 0.00 | 0.098 |
| | Do not see the difference in online and classroom learning | 41 | 73.48 | | | |
| | Learn better through online learning as compared to classroom | 8 | 38.88 | | | |
| | I predict I will not learn well online | 19 | 95.53 | | | |
| | I predict I will learn better online | 1 | 67.00 | | | |
| Lack of support services (Factor 3) | Cannot learn well online classes as in traditional classes | 124 | 96.75 | 0.77 | 0.94 | 0.002 |
| | Do not see difference in online and classroom learning | 41 | 101.10 | | | |
| | Learn better through online learning as compared to classroom | 8 | 82.94 | | | |
| | I predict I will not learn well online | 19 | 96.21 | | | |
| | I predict I will learn better online | 1 | 87.50 | | | |

Table 2 shows a statistically non-significant difference in the scores of barriers of lack of pre-requisite skills, technical problems, and lack of social interaction across different student perceptions. The highest mean rank score is for students who reported they do not learn well in online classes as in traditional classes as shown in table 2.

Table 2: difference in the scores of barriers of lack of pre-requisite skills, technical problems and social interactions across categories of perception of student effectiveness of online in comparison to campus-based teaching.

| Barriers to online learning | | N | Mean Rank | Chi-square | P value | Epsilon squared |
|---|---|---|---|---|---|---|
| Lack of pre-requisite skills for online learning (Factor 4) | Cannot learn well in online classes as in traditional classes | 124 | 103.49 | 5.752 | 0.218 | 0.035 |
| | Do not see the difference between online and classroom learning | 41 | 86.10 | | | |
| | Learn better through online learning as compared to classroom | 8 | 82.13 | | | |
| | I predict I will not learn well online | 19 | 87.95 | | | |
| | I predict I will learn better online | 1 | 30.50 | | | |
| Technical problems (Factor 5) | Cannot learn well in online classes as in traditional classes | 124 | 102.44 | 5.520 | 0.238 | 0.027 |
| | Do not see difference between online and classroom learning | 41 | 93.05 | | | |
| | Learn better through online learning as compared to classroom | 8 | 84.69 | | | |
| | I predict I will not learn well online | 19 | 73.50 | | | |
| | I predict I will learn better online | 1 | 130.00 | | | |
| Lack of Social interactions (Factor 6) | Cannot learn well in online classes as in traditional classes | 124 | 101.29 | 6.166 | 0.187 | 0.033 |
| | Do not see difference between online and classroom learning | 41 | 97.50 | | | |
| | Learn better through online learning as compared to classroom | 8 | 59.13 | | | |
| | I predict I will not learn well online | 19 | 86.84 | | | |
| | I predict I will learn better online | 1 | 40.50 | | | |

## DISCUSSION

The opportunity for e-learning is increasing as the Internet's adoption develops. There is a lot of documentation that shows there are no substantial variations between the efficacy of well-designed e-learning and well-designed in-person education[7]. Considering this, there are still substantial disparities in how students view overall web-based education. Towards the level that all these students' perspectives of their earlier days, current, or future e-learning perspectives are negligible, they may contribute to consequences such as greater dropout percentages, decreased student enthusiasm to gain knowledge and reduced student contentment with the learning opportunity[8]. Students' attitudes toward distant learning have been established in both positive and negative ways in surveys. The researchers conducted a study of the material on students' perceptions of internet-based education hurdles, as well as students' perceptions of education obstacles overall. The purpose of the research study described in this paper was to portray the perspectives of students who varied on different variables including a) instructor and personal problems, b) motivational problems and time interruptions, c) lack of support services, d) lack of pre-requisite skills or online learning, technical problems, e) and lack of social problems. Recent research has discovered considerable disparities in learning, perspectives, ambition, and attitudes depending on age, sex, race, enthusiasm, and learning institutions[9-12]. A review done by Muilenburg LY reported that the deficiency of interpersonal connection was indeed probably the most essential impediment to individuals studying online. The very next three most significant hurdles were administrative/instructor concerns, timing and assistance for courses, and student enthusiasm. Technical issues and Internet expenses have become less significant hurdles. Deficiency of technical and intellectual abilities was identified as a relatively low barrier to learning online by participants[6,13]. He also concluded that (67.7%) of participants said they feel more confident. Another analysis done by Shea P reported that the higher the proportion of the program mark centered on conversation, the greater comfortable the students were about the session, and the further they felt they learnt from that too, the more engagement they believed they had for the teacher and their colleagues[14]. In research, Dziuban and Moskal demonstrate very strong

associations and linkages between online program participation and student contentment. Students participating in Internet-based (totally online) classes, mixed-mode (some online, some face-to-face) programs, and Internet, face-to-face classes completed a survey administered by the Central University of Florida's Research Initiative for Teaching Effectiveness for more than a three-year duration. Statistically substantial connections between the quantity and quality of the connection and learner contentment were discovered by them[15]. Rourke, proposed society of investigation paradigm for virtual educational settings that had three present elements: cognition, societal, and educational[16]. Picciano AG in his survey reported that student perspective of interpersonal participation has a minor but statistically substantial adversarial association with exam scores, whereas student perspective of social participation has a substantial favorable and statistically substantial connection with written task results. Attendance in the regular conversations, that developed an understanding of someone else's viewpoints, was required for public interactions in the course[17,18].

## CONCLUSION

The difference in the scores of instructors and personal problems across the different student perceptions of the effectiveness of online and campus-based teaching was not significant. The highest score for instructor and personal problems was seen in individuals who reported that they cannot learn well online as in traditional classes. Students who reported the barrier of lack of support services as their highest barrier did not experience a great difference between the two modalities. The difference in the motivational problems and time interruptions across the different student perceptions was significant with the highest mean rank score for students who cannot learn well in online classes as in traditional classes. A non-significant difference in the scores of barriers of lack of pre-requisite skills, technical problems, and lack of social interaction across different student perceptions. The highest mean rank score was for students who reported they do not learn well in online classes as in traditional classes

**Limitation:** Larger sample size would have helped unravel more findings**.**

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