The Professional Medical Journal
www.theprofesional.com

ORIGINAL PROF-0-5396

https://doi.org/10.29309/TPMJ/2021.28.05.5396

Advances in medical education; perceptions of faculty and students towards e-learning vs. traditional learning in a public sector medical college in Pakistan.

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Article received on:
02/07/2020
Accepted for publication:
12/09/2020

ABSTRACT… Objective: E-learning is a growing need of modern day education generally and of medical universities particularly. This study is targeted to compare and assess different perceptions of the faculty and the students towards e-learning at a public sector medical college. **Study Design:** Cross-sectional study. **Setting:** Department of Medical Education, Sahiwal Medical College, Sahiwal. **Period:** 1st May 2020 to 31st May 2020. **Material & Methods:** The questionnaire was sent to all the participants by Whatsapp because of COVID-19 pandemic. MBBS students of 4th year and final year MBBS and all the faculty members of clinical and basic medical sciences were included in the study. The participants had to choose among options of 'agreed, neutral and disagreed'. **Results:** The response rate of faculty members was 91.66% and that of undergraduate students was 91%. Among faculty members, 34 (51.50%) were males while 32 (48.50%) were females. Female students were having majority of participation (60.40%). Most of the faculty and students were disagreed with the fact that 'E-learning is a suitable means of education for students in Pakistan'. Though there was an overwhelming agreement of students (80%) and staff (88%) with agreement on the point that 'information and communication technologies (ICT) play an effective role in promoting education'. Fifty three percent of students and 67% of the faculty members agreed that 'E-learning systems can fulfill the challenging needs of present times'. **Conclusion:** Our study concludes that there are some reservations of both students and the faculty regarding usage of e-learning over traditional learning at public sector medical college. In our study while comparing, the majority of both the groups were having almost same opinions related to implementation of e-learning methodology.

Key words: COVID-19, E-learning, Faculty, MBBS.

Article Citation: Kamal Z, Jamil AZ, Waseem M, Iqbal MJ, Aziz N, Afzal HS. Advances in medical education; perceptions of faculty and students towards e-learning vs. traditional learning in a public sector medical college in Pakistan. Professional Med J 2021; 28(5):619-624.
https://doi.org/10.29309/TPMJ/2021.28.05.5396

INTRODUCTION

As of late the devices accessible for educating in college settings have transformed drastically from chalk, chalkboards and overhead projectors to learning management services (LMS).[1] LMS are presently ordinary in advanced education for both on-campus and distance students and are comprehensively characterized as data frameworks that encourage e-learning by supporting instructing and learning, however that additionally can perform authoritative assignments and encourage correspondence among teachers and students.[2] Be that as it may, the corpus of writing committed to seeing how its utilization impacts on instructive practices in advanced education is as yet being worked on.

In spite of the critical interest in e-learning frameworks in both advanced and evolving nations, the degree of utilization of these frameworks by scholastics and their students is regularly low.[3] Various scientists have looked to add to comprehending this subject by research that. emphases on the variables that influence the reception of e-learning[4,5] or client fulfillment with the e-learning framework.[6,7,8] Different scientists have looked to recognize the effect of e-learning frameworks on understudy learning.[9] An elective way to deal with the assessment of the experience of e-realizing, that likewise can possibly illuminate a plan for additional advancement regarding e-learning frameworks, is to investigate the critical success factors (CSF's) or the attributes

of e-learning frameworks that, from the client point of view, add to their prosperity.[10] The idea of critical success factors has its underlying foundations in the hierarchical methodology writing. CSFs are the most significant elements that ought to be overseen so as to upgrade the odds of undertaking or potentially hierarchical achievement.

The possibility of virtual learning in medical colleges is new. As colleges of medical sciences are isolated from different colleges which are under the umbrella of Ministry of Science, Research, and Technology, and along these lines these medical schools are a long way from specialized and designing majors, virtual training was dismissed appropriately.[11] Though the significance of virtual learning is multiplied in medical majors, for medication is in direct relationship with human life and adjacent to explore and instructive issues, exact treatment of patients' needs new and refreshed data close by current techniques.[12] Then again, medical preparing won't be done at college and will be kept during the expert existence of medical specialists. Additionally, as medical students will travel everywhere throughout the nation to furnish individuals with human services benefits, the requirement for virtual and electronic correspondence appears to be vital. Utilizing present day instructive techniques is essential to the point that some instructive researchers think of it as more fundamental than having the logical information and the data of a particular major.[13,14]

During the recent impact of COVID-19 on the various aspects of life, the educational sector was also severely affected.[15,16] But in these dark times of COVID-19 the need for e-learning emerged more than ever before as students and teachers are not left with other option to interact.

There is inadequate literature that investigates the basis behind the determination of video for an educational plan, the ideal instructive effect and the students' reactions to the video. With students so associated with data from the web (and different students), teachers wishing to have fruitful and significant talks must figure out how to consolidate their introduction style and content-related activities (for example recordings) in manners that intrigue to their students. So, our study targets all these areas of concerns of students and teachers related to e-learning and will also make a comparison of both groups.

MATERIAL & METHODS

The study is cross-sectional and done with the help of web based questionnaire. The study was conducted at Sahiwal Medical College Sahiwal by Medical education department in a period of one month from 1st May 2020 to 31st May 2020. Informed consent was taken from all the participants of the study beforehand. The questionnaire was made by using Google docs and then sent to all the participants by Whatsapp. Hand on submission of questionnaire was not done because of COVID-19 pandemic. Students of 4th year and final year MBBS were sent the questionnaire while all the faculty members of clinical and basic medical sciences were also included in the study. The questionnaire was comprising of close ended questions whose answers were to be given on a scale of three. The participants had to choose among options of 'agreed, neutral and disagreed'.

SPSS- version 20 was used to measure frequencies of different demographic characteristics of both groups along with their responses of different questions were also assessed by using frequency statistics.

RESULTS

The response rate of faculty members was 91.66%. As far as the demographic characteristics of the faculty members of Sahiwal Medical College is concerned, 34 (51.50%) were males while 32 (48.50%) were females. Majority of the faculty members were from age groups 36-50 and above 50 (96%). The faculty members of basic medical sciences responded more (66.70%) to questionnaire than those of medical sciences (33.30%). Almost 61% of the faculty members of Sahiwal Medical College Sahiwal were having post-graduation degrees (Table-I).

The response rate of undergraduate students of Sahiwal Medical College Sahiwal was also

91%. Female students were having majority of participation (60.40%) than the males (39.70%). Out of two senior most classes of MBBS at Sahiwal Medical College Sahiwal, Final year students participated in the survey with 59.30% while 4th year students' participation was 40.70% (Table-II).

We also calculated and compared percentages of different responses of the students and faculty to the questions asked in the questionnaire. Both the groups responded on a scale of three from 'agreed, neutral and disagreed'. In Table-III different percentages of the answers by students and faculty are given.

Most of the faculty and students were disagreed with the fact that 'E-learning is a suitable means of education for students in Pakistan' (45% and 57% respectively). Response to a question 'The E-learning system is an alternative for the traditional system of teaching' was also not much different as both the groups of students and faculty members were in disagreement (36% and 43% respectively). 'Learning materials or recorded lectures are as effective as face-to-face teaching/ classroom situations' found 54% of the students and 61% of the faculty members in disagreement, while majority of the students (53%) and also faculty members (73%) disagreed with the fact that 'E-learning is more motivating than traditional learning'. Though there was an overwhelming agreement of students (80%) and staff (88%) with agreement on the point that 'information and communication technologies (ICT) play an effective role in promoting education'. Again in a response to a question stated,' E-learning course materials are more comprehensive than traditional teaching materials', 46% of the students and 42% of the faculty members agreed. Fifty three percent of students and 67% of the faculty members agreed that 'E-learning systems can fulfill the challenging needs of present times for teaching masses'. 'The continuation of e-learning in future' found students in disagreement (44%) but majority of faculty members (55%) were positive about this notion.

Variable		n (%)
Gender	Male	34 (51.50)
	Female	32 (48.50)
Age	20-35	4 (6.10)
	36-50	32 (48.50)
	> 50	30 (45.50)
Department	Basic	44 (66.70)
	Clinical	22 (33.30)
Post-Graduation	Yes	40 (60.60)
	No	26 (39.40)

Table-I. Demographic characteristics of faculty (N=66).

Variable		n (%)
Gender	Male	72 (39.60)
	Female	110 (60.40)
Academic Career (MBBS)	4th year	74 (40.70)
	Final Year	108 (59.30)

Table-II. Demographic characteristics of students (N=182).

DISCUSSION

The response rates of our study for both students and teachers were quite good so making our study a valid one. Among students most participants were females[17] while among faculty the participation was relatively more from males which is similar to a previous study.[18] Most of the faculty members were having post-graduation degrees too which is also similar to a study done in the past.[19]

Our study found out that the responses of the students and the faculty were quite similar when compared to each other for almost all the questions. Half of the questionnaire of our study found out that the faculty members and the students disagreed with the notions of 'E-learning is an appropriate method for training for students in Pakistan', 'The E-learning framework is an option for the customary arrangement of educating', 'Learning materials or recorded talks are as successful as up close and personal instructing/ study hall circumstances' and 'E-learning is more inspiring than conventional learning'. A previous study found similar results as far as the response of the faculty is concerned but they contradicted us with the response of the students.[21]

Questions	Students' Responses			Teachers' Responses		
	Agreed	Neutral	Disagreed	Agreed	Neutral	Disagreed
E-learning is a suitable means of education for students in Pakistan	29%	14%	57%	24%	31%	45%
The E-learning system is an alternative for the traditional system of teaching	36%	28%	36%	28%	29%	43%
Learning materials or recorded talks are as powerful as face-to-face instructing/ homeroom circumstances	32%	14%	54%	24%	15%	61%
E-learning is more motivating than traditional learning	22%	25%	53%	6%	21%	73%
Today, information and communication technologies (ICT) play an effective role in promoting education	80%	14%	6%	88%	3%	9%
E-learning course materials are more comprehensive than traditional teaching materials	46%	24%	30%	42%	33%	25%
E-learning frameworks can satisfy the difficult needs of present occasions for educating masses	53%	24%	23%	67%	21%	12%
Do you think E-learning system should be continued	34%	22%	44%	55%	27%	18%

Table-III. Responses of students and faculty to different questions

Another study conducted previously found that teachers felt anxious while turning to online mechanisms of taking classes[22] while our study showed that the faculty was quite clear in their minds to various aspects of taking classes by online methods. In a previous study conducted by Kamal et al, the mean score for the question 'E-learning is more motivating than traditional learning' was highest of all at 2.73 with S.D of 5.839[23], but in our study it was more in disagreement.

In another set of questions our study found out that the faculty members and the students of Sahiwal Medical College Sahiwal agreed to the answers of the questions of 'information and communication technologies (ICT) assume a powerful job in advancing training', 'E-adapting course materials are more extensive than customary teaching materials' and 'E-learning frameworks can satisfy the difficult needs of present occasions for instructing masses'. A previous study contradicted with our results in answering of the question 'E-learning course materials are more comprehensive than traditional teaching materials'. Teachers did not agree to this fact because they thought that traditional course materials are more comprehensive.[24]

The answer to the question of 'The continuation of e-learning in future' found the students and the faculty on opposite poles as majority of the students disagreed with it while the respected faculty agreed with it. Two of the previous studies also found the similar results in which the faculty agreed that the e-learning should be continued in future though they did not take this survey from the students.[25,26]

In our questionnaire we also took some recommendations from the faculty members for improvement of the proper implementation of e-learning system at Sahiwal Medical College Sahiwal. Following were some of these suggestions by the faculty;

'More input from center is required', 'it should be more user friendly',
Some members of the faculty also suggested the Zoom app to be used as a mean of

e-learning teaching. 'Zoom app in which direct communication is much better for students and teacher interaction in which attendance and video interaction is necessary and if student out during lecture it should be mentioned on it'. Some also mentioned 'E Learning technology can be made better by mass awareness amongst the teaching staff and by conducting multiple workshops'.

Majority of the faculty felt that 'Students should participate. If they don't take interest, then no motivation is there. Majority are least bothered in fulfilling assignments'.

"Primarily, we need to educate the importance of E-learning to the faculty members and students" was also recommended by the faculty. Few suggested that 'Proper schedule should be given to students about lectures and assignments n assessments are must and attendance of students also to make it effective'.

The need for establishing a strong IT department was also demanded by the faculty. 'Establishment of IT & computer assistance cell for faculty during working hours of college to help them resolve common problems, to do recordings and guide wherever needed'.

Faculty members also appreciated the efforts made by the administration of Sahiwal Medical College Sahiwal by quoting that 'SLMC is taking good steps in providing e learning to students'.

Some members emphasized that 'Traditional learning is the best method of learning. But due to current corona situation e-learning is the need of an hour. It should be continued until the conditions become favorable'.

And finally few of the members from the faculty indicated that "Feedback from students and regular submission of assignments in a given time period for each lecture is important'.

CONCLUSION

Our study concludes that there are some reservations of both students and the faculty regarding usage of e-learning over traditional learning at public sector medical college. In our study while comparing, the majority of both the groups were having almost same opinions related to implementation of e-learning methodology.

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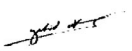
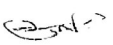
1	Zahid Kamal	Conception and design of work, results compiling.	
2	Ahmad Zeeshan Jamil	Help in biostatics and data analysis.	
3	Muhammad Waseem	Supervision and revising it critically for important intellectual content.	
4	Muhammad Junaid Iqbal	Final approval of the version to be published.	
5	Nauman Aziz	Analysis and interpretation.	
6	Hafiza Swaiba Afzal	Write-up of the article.