



Perception Of E-Learning In Medical Students Of Fatima Jinnah Medical University

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ABSTRACT

Introduction: In the modern era, advancing information technology is leaving an impact on the educational system as well wherein classroom learning is being replaced by e-learning. This type of learning is a part of formal educational system in many institutions around the globe. HEC is emphasizing the implementation of e-learning in formal education, thus perception of students about e-learning need to be known.

Aims & Objectives: To determine the perception of medical students of FJMU regarding e-learning. All institutions throughout world had to shift to online learning during COVID-19 pandemic. This new online system is challenging for many students. The current study was planned to know the perception of medical students of FJMU about e-learning.

Place and Duration of Study: This was a descriptive cross-sectional study that took place in FJMU, Lahore and duration of study was 2 weeks in August 2021.

Material & Methods: The study was conducted on 377 medical students of 1st and 2nd year MBBS. Nonprobability purposive sampling technique was employed. A predesigned and pretested questionnaire was administered to the students in August 2021. Data was analyzed by SPSS 23 and frequency % was calculated for quantitative variables as perceived usefulness, perceived ease of use and e-learning stressors were calculated.

Results: Mean age of students were 19.4 years, with range of 18-22 years and all were females. Majority (85%) used mobile phones for e-learning. 72.6% of the students preferred face to face learning over e-learning. Major stressors included inadequate IT skills, lack of motivation and poor internet connections.

Conclusion: Medical students of FJMU didn't prefer e-learning over face to face learning.

Keywords: E-learning, Covid 19, medical students

INTRODUCTION

Learning is the process of obtaining knowledge and skills through study or other means for a specific purpose. As time is passing, the trends and modes of learning are changing day by day. The majority students are using mobile phones, laptops, tabs and tools like that for acquiring knowledge. The traditional ways of learning are gradually being replaced by new systems involving use of information technology (IT)¹. Thus, the modes of learning are classroom model, online or e-learning and blended learning. Classroom model demands the physical presence of teacher and students in a room and learning is by their direct communication to each other. E-learning is totally virtual by means of use of computer and internet technologies in which there is no physical communication amongst teachers and students, while blended model is the mixture of both forms².

E-learning system is a part of formal education in many universities across the world and many learners prefer this system due to being easy, flexible, and controllable in terms of time and place^{3,4,5}. A study conducted in Syiah Kuala University, Indonesia showed a positive response of students towards online learning and their students enjoy this learning⁶. But other learners prefer face to face learning due to lack of student teacher interaction and complexity of the process as students of Air-langga University, also in Indonesia rejected the e-learning system due to being a complex process⁷. Similarly, another study on university students in Oman highlighted barriers to online learning and preferred face to face system⁸, while a study conducted in University of Sharjah in United Arab Emirates showed a positive attitude of students towards online learning⁹.

In comparison to the world, in Pakistan e-learning is not a part of our routine educational system but in year 2020, this system was used in many institutions. Due to the Covid-19 pandemic, almost

all educational institutions were closed around the globe. To prevent the academic loss, all institutions including medical schools have tried to facilitate the students by providing online learning using google classrooms, webinars, online video meetings etc. This has raised multiple challenges for the students^{10,11}. Thus most of our faculty members and students are in process of getting used to new online teaching system, as reflected by the study conducted in Liaquat Medical & Dental College in Karachi showed negative impact of online learning in medical students during the current situation²². Higher education system of Pakistan is emphasizing the implementation of e-learning system in formal education throughout the country¹³. That's why it is necessary to know the students point of view regarding the acceptability of e- learning system. So, a study is planned to determine the perception of medical students of FJMU regarding e-learning in the current situation.

MATERIAL AND METHODS

Ethical approval of study was taken from Institutional/ Ethical Review Board of FJMU with number 12/CIERB dated 09-08-2021.

A Descriptive cross sectional study was conducted at FJMU, Lahore for a period of 2 weeks in August 2021. Using the non probability purposive sampling 377 1st and 2nd year MBBS were inducted in the study as calculated by Rao soft¹⁴)

A predesigned and pretested questionnaire obtained from a study conducted on university students in Ghana with slight modification was used¹⁵.

The Questionnaire had 21 questions divided into 6 subdivisions.

1st one was the general information. The remaining 4 sections were based on the technology Acceptance Model (TAM) and covered the following:

Perceived usefulness (PU) of e- learning

Perceived ease of use (PE)

Attitude towards e-learning (AT)

Intention to use (IU) e-learning in future.

And final subdivision included e- learning stressors.

All Items were assessed on 5 point Likert scale, from strongly disagree 1, disagree 2, no response 3, agree 4 and strongly agree 5.

At the end, participants were thanked for their cooperation. Data was collected by administering the questionnaire to the students during tutorial classes.

Data Analysis:

Data was entered and analyzed in SPSS-23. Descriptive statistics was applied for getting the frequency percentage of the data.

RESULTS

The current study has been conducted on 377, 1st and 2nd year medical students of FJMU. Mean age of students was 19.4years with range of 18-22 years. All students were females and majority used mobile phones (85%) for the online learning. Most of the students liked zoom app for learning (74.2%). The general characteristics of study participants are given in Table-1.

Sr.No		Frequency	Percentage (%)
1	Gender		
	Male	0	0
	Female	377	100
2	Year of Study		
	1st Year	158	41.9
	2nd Year	219	58
3	Choice of Gadget/Device		
	Mobile Phones	321	85
	Laptop	56	14.8
4	Choice of platform		
	Zoom App	280	74.2
	Google	27	7.1
	Classroom Microsoft Team	70	18.5

Table-1:General characteristics of study population

Perceived Usefulness of E- Learning(PU):

Majority of the medical students thought that online learning improves the access to the learning materials. Students strongly disagreed to the better engagement of students in learning. Students thought that this online learning is much time consuming and less interactive among students and teachers. Overall this learning system impacted the respondents less as compared to face to face learning as shown in Table-2.

Perceived Ease Of Use:

Majority of students found online learning more difficult than consulting library. Listening to lectures online was troublesome for majority of students, moreover students also faced difficulty in expressing their thoughts during composing and attempting online E- learning assignments and submissions. Most students disagreed with the statement that they were quick while using web for E learning as depicted in Table-3.

Sr. no	Questions	Strongly disagree	disagree	No response	Agree	Strongly agree
1	E-learning develops admittance to learning material	52.8%	36.2%	3.45%	5.3%	2.22%
2	E-learning increase learners commitment in learning	55.6%	36.1%	0.6%	2.2%	5.8%
3	E-learning better develops educator's and learners' connection	48.7%	33.3%	4.2%	9.2%	5.2%
4	E-learning is excessively tedious to utilize	12.3%	8.9%	7.4%	31.5%	41.4%
5	E-learning has little influence on me	5.8%	12.1%	10.1%	34.2%	38.4%
6	E-learning help to support my insight	40.2%	33.9%	9.2%	13.2%	4.2%
7	My research abilities increased several fold by e learning	33.1%	32.1%	22.5%	9.8%	2.5%

Table-2: Showing Percentage For Perceived Usefulness

Sr. no	Questions	Strongly disagree	disagree	No response	Agree	Strongly agree
1	Utilizing e learning is more simple than utilizing library	34.8 %	36.3 %	20.1 %	2.5 %	6.3 %
2	I can peruse the lecture notes through web without any problem	45.4 %	39.2 %	-	9.1 %	6.4 %
3	It is easy to express my viewpoint by composing through E-learning	33.4 %	18.8 %	27.2 %	10.8 %	9.8 %
4	I am quick while using the web for E learning	36.4 %	33.3 %	10.1 %	11.4 %	8.8 %
5	I find E learning clear and understandable	37.5 %	45.3 %	-	12.4 %	4.8 %

Table-3: Showing percentage for Perceived Ease of Use.

Attitude Towards E- Learning (AT):

49.7% students strongly disagreed with the idea of online learning as shown in the Fig-1 and 40% suggested that online learning should be discouraged as given in Fig-2 revealing our medical students to have negative attitude toward online learning.

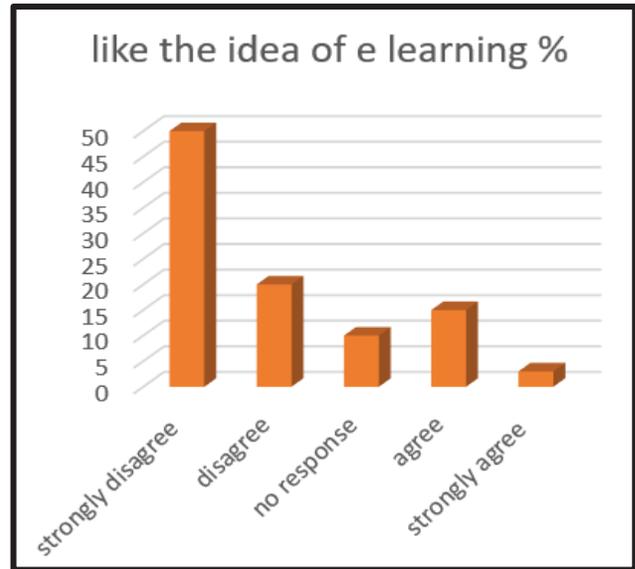


Fig-1: Showing likeness of E-learning

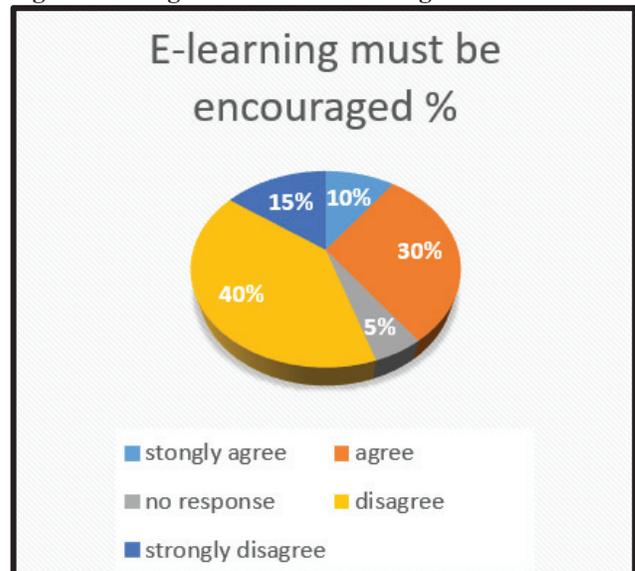


Fig-2: Students View About Encouraging E-Learning

E-Learning Stressor:

The reasons behind this negative attitude towards online learning included inadequate IT skills and inadequate training on using online learning, poor motivation and expectation from part of students and major stressor included the slow internet connections as given in Table-4.

Intention To Use In Future:

Majority of our students (72.5%) preferred face to face learning over online learning, 20.1% also choose hybrid method and only 8.9% students preferred online learning shown in Fig-3.

Stressors	Strongly Disagree	Disagree	No Response	Agree	Strongly Agree
My inadequate computer /mobile skills stresses me.	6.8	20.8	-	29.0	43.4
Inadequate training on using E-learning stresses me.	-	23.5	7.3	39.4	29.8
Poor motivation and expectation from me regarding E-learning stresses me.	9.8	18.8	4.5	39.9	27.0
Limited resources as weak internet connections stresses me.	10.8	20.6	1.3	31.9	35.4

Table-4: Stressors of E-learning

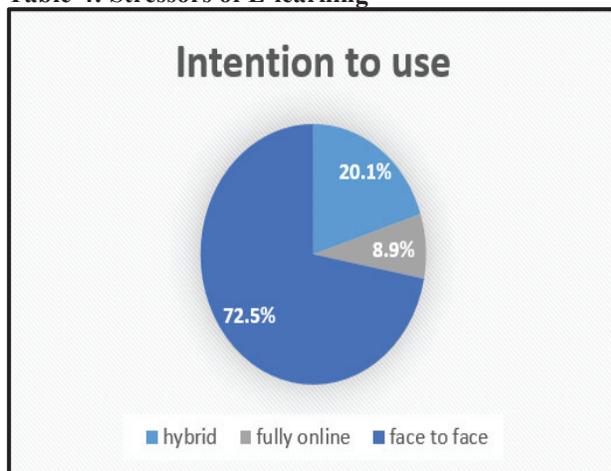


Fig-3: Showing Intention Of Students To Use E-Learning

DISCUSSION

The current study was planned to assess the perception of students of FJMU about E- learning during Covid-19 pandemic.

Our study showed that the majority of our students used mobile phones for e-learning and preferred zoom platform for learning followed by Microsoft teams. Many studies also showed preference of mobile phone for online learning in students^{16,17,18}, the reason being the easy interaction at mobile and easy to carry anywhere.

Our students were forced to e-learn during COVID 19 pandemic as many institutions throughout the world but their overall perception about E-learning was not positive. Majority of students had negative views like E-learning has little impact, is time

consuming and less engaging, this is in line with many studies round the world like Poland¹⁹, Saudi Arabia²⁰ and India²¹ etc. One study conducted in Liaquat College of Medicine and Dentistry in our country also highlighted that 77% of medical students had negative perception for e-learning during COVID 19 pandemic¹². Another study conducted by Ansar et.al. in 10 different medical, engineering and arts institutions also concluded that 81% of students didn't want to continue with e-learning²².

In our country, online learning is going on in many institutions even before COVID 19, students had different opinions regarding e- learning, some preferred while others rejected this system. A study conducted in nursing students highlighted that nursing students preferred to adopt online learning²³, while in our study, 72% of our students preferred face to face learning.

Thus the majority of students around the globe are not in favor of online learning. Our study has also highlighted the major stressors that might be the reason for rejecting online learning. These included inadequate training, lack of information technology skills and poor internet connection, the same stressors have also been noted in study conducted in India²⁴. By overcoming these stresses, online learning acceptability may be increased and this online system can be adopted in a better way, if its need arises again in future.

CONCLUSION

E-learning system was not digestible for medical student of FJMU during COVID19 pandemic lock down period. The University should take measures to overcome the stressors of e-learning well in time so that students learning isn't affected if a similar situation arises.

REFERENCES

1. Ali M, Hossain Khalid, Ahmed T (2018). Effectiveness of E-learning for university students: evidence from Bangladesh. *Asian J Emp Res.* 2018; 8(10), 352-60
2. Woods M, Rosenberg ME. Educational Tools: Thinking Outside the Box. *Clin J Am Soc Nephrol.* 2016;11(3):518-26. doi:10.2215/CJN.02570315
3. Govindasamy T. Successful implementation of e-Learning: Pedagogical considerations. *Internet High Educ.* 2001;4(3):287-99.
4. Blas TM, Fernandez AS. The role of new technologies in the learning process: Moodle as a teaching tool in Physics. *Comput Educ.* 2009;52(1):35-44.
5. Bentley Y, Selassie H, Shegunshi A. "Design and Evaluation of Student-Focused eLearning" *Elect J E-Learn.*2012;1(10):1-12.

6. Vitoria L, Mislinawati M, Nurmasyitah N. Students' perceptions on the implementation of e-learning: Helpful or unhelpful? *J Physics*. 2018;1088
7. Kwary DA, Fauzie S. Students' achievement and opinions on the implementation of e-learning for phonetics and phonology lectures at Airlangga University. *Educ Pesqui*. 2018;44.
8. Al-senaiddi OS, Lin L, Poirot J. Barriers to adopting technology for teaching and learning in Oman. *Comp Educ*. 2009; 53:575-90
9. Elshami W, Taha MH, Abuzaid M, Saravanan C, Al Kawas S, Abdalla ME. Satisfaction with online learning in the new normal: perspective of students and faculty at medical and health sciences colleges. *Med Edu Online*. 2021; 26; 1-10
10. Kow A, Chong Y, Lau T, Samarasekera DD, Li D, Goh M, et al. Response and Lessons Learnt Managing the COVID-19 Crisis by School of Medicine, National University of Singapore. *MedEdPublish*. 2020; 9(1): 1–12.
11. Aggarwal A, Comyn P, Fonseca PM. Discussion: Continuing online learning and skills development in times of the COVID-19 crisis. 27 March - 17 April. Available online: https://www.skillsforemployment.org/KS/P/en/Discussions/EDMSP1_256625.
12. Abbasi S, Ayoob T, Malik A, Memon SI. Perceptions of students regarding E-learning during Covid-19 at a private medical college. *Pak J Med Sci*. 2020;36(COVID19-S4):COVID19-S57-S61.
13. Higher Education Commission. HEC COVID-19 Policy Papers. 2020 [cited 2020Apr22]. [https://www.hec.gov.pk/english/HECAnnouncements/Documents/nCoVirus/Covid-19-Policy-Guidance-No.5-Online Readiness.pdf](https://www.hec.gov.pk/english/HECAnnouncements/Documents/nCoVirus/Covid-19-Policy-Guidance-No.5-Online%20Readiness.pdf)
14. Raosoft. Sample Size Calculator. 2004. Available online. <http://www.raosoft.com/samplesize.html>
15. Mamattah RS. Student perception of e-learning. [master's thesis]. Ghana: Linköping University;2016.
16. Yilmaz O. E-Learning: Students Input for Using Mobile Devices in Science Instructional Settings. *Edu Learn*. 2016;5:182. doi: 10.5539/jel.v5n3p182
17. Roberts N, Rees M. Student use of mobile devices in university lectures. *Australas J Educ Technol*. 2014;30:4. doi:10.14742/ajet.589
18. Martinez IG, Sanchiz DC, Batanero JMF, Rosa ALDL. Using Mobile Devices for Improving Learning Outcomes and Teachers' Professionalization. *Sustainability*. 2019;11:6917. doi: 10.3390/su11246917
19. Michał B, Bączek Z, Monika S, Andrzej J, Beata KW. Students' perception of online learning during the COVID-19 pandemic. *Medicine*. 2021;100(7): e24821 doi: 10.1097/MD.00000000000024821
20. Al Zahrani, EM, Al Naam YA, AlRabecah SM et al. E-Learning experience of the medical profession's college students during COVID-19 pandemic in Saudi Arabia. *BMC Med Educ*, 2021; 443 <https://doi.org/10.1186/s12909-021-02860-z>
21. Gupta S, Dabas A, Swarnim S, Mishra D. Medical education during COVID-19 associated lockdown: faculty and students' perspective. *Med J Armed Forces India* 2021;77(Suppl 1):S79-S84. <https://doi.org/10.1016/j.mjafi.2020.12.008>
22. Ansar F, Ali W, Khattak A, Naveed H, Zeb S. Undergraduate students' perception and satisfaction regarding online learning system amidst COVID-19 Pandemic in Pakistan. *J Ayub Med Coll Abbottabad* 2020;32(Suppl. 1):644–50
23. Ali N, Jamil B, Sethi A, Ali S. Attitude of nursing students towards e- learning. *Adv Health Prof Educ*. 2016;2(1):24-29
24. Chakraborty M, Reddy YA, Ghoshal JA, Amudharaj D, Tripathi M. Preparedness of medical students towards e-learning conducted during COVID-19 lockdown: A cross-sectional descriptive study. *J Edu Health Promot*2021;10:302 DOI: 10.4103/jehp.jehp_1125_20

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