Research Article

Educational intervention study for awareness about various e-learning platforms to medical students of Indore city

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ABSTRACT

Background: It is usually supposed that new technologies make modifications in instruction. Many proponents of e-learning consider that everyone should be prepared with basic knowledge of technology as well as utilize it as a mean for getting educational aims. **Objectives**: The objective of this study is to assess knowledge and attitude of students toward various e-platforms and educate them for the same. **Materials and Methods**: A cross-sectional observational college-based study was carried out in MGM Medical College, Indore. With stratified random sampling technique, a total of 300 UG MBBS students were taken as study participants. Written informed consent was taken, and pre-designed, pre-tested, semi-structured questionnaire was used for data collection before and after knowledge awareness intervention. The data collected were analyzed through percentages and frequencies, and the data were presented in table formats obtained using Excel and some using Statistical Package for Social Science-22. Study duration was September 1, 2016– March 1, 2017. Relevant statistical test was applied and *P* value was considered statistically significant when it is <0.05. **Results**: Only 53% of students were having knowledge about e-learning, but after intervention, it increased to 100%. ($P < 0.005$), and 25% of students were having correct understanding about e-learning, but after intervention, it increased to 41% ($P < 0.005$). 53% of students who were using e-platforms before intervention which increased to 89% after intervention ($P < 0.005$). **Conclusion**: With educational intervention, the numbers tremendously increase in favor of e-Learning. With study findings, we conclude that most of the students liked and want to use e-learning platforms for their education and academics.

KEY WORDS: Awareness; E-learning; Educational Intervention

INTRODUCTION

The traditional instructional delivery system in universities for a long time has been a classroom with a professor giving speeches to students and the students listening and taking notes. Communication between the professor and students has been identified to be a critical learning component in this delivery platform.[1]

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Technology suggests many new characteristics that can be applied to make instruction more interesting to learners. It is usually supposed that new technologies make modifications in instruction. Many proponents of e-learning consider that everyone should be prepared with basic knowledge of technology as well as utilize it as a mean for getting educational aims.[2]

As an outcome of this, many universities have used e-learning in a main way. For this reason, the necessity for academic and technical knowledge to teach utilizing the Internet has been appeared, and this knowledge is becoming core proficiency for many professors. Some scholars have predicted that the traditional classroom will vanish. E-learning has entered the instruction as well as the corporate world in a main way and it also completes the traditional delivery styles. It has enabled the traditional educational patterns like distance learning.[3]

In the past few years, e-learning has become as a promising solution to lifelong learning and continuous medical education; thus, thousands of online courses, degrees, and certificate programs are offered by universities worldwide.[4]

One of especially significant new ICT-a is the Internet, a worldwide computer network connecting millions of computers and ensuring the use of a set of network instruments called the World Wide Web or shortly Web. It is often said that expansion of the Internet is comparable with the significance of Gutenberg's discovery of printing technology. While printing accelerated manipulation of information stored by then in the form of hand-written texts, the Internet enormously accelerated information manipulation by applying the today's electronic technology. In this manner, an unforeseen extent of access to information generated all around the world in various fields of human activity is allowed, which greatly affects medical science and everyday work as well.[5]

MATERIALS AND METHODS

A cross-sectional observational college-based study was carried out in MGM Medical College, Indore, Madhya Pradesh. With stratified random sampling technique, a total of 300 UG MBBS students were taken as study participants. Written Informed consent was taken from the participants, and pre-designed, pre-tested, semi-structured questionnaire was used for data collection before and after knowledge awareness intervention. The data collected were analyzed through percentages and frequencies in which the data were presented in table formats and charts which were obtained using Excel and some using Statistical Package for Social Science-22. Study duration was September 1, 2016– March 1, 2017. Relevant statistical test was applied was applied and p value was calculated where ever required and considered statistically significant when it is <0.05.

RESULTS

We conducted a cross-sectional interventional study on 300 undergraduate students of medical colleges of Indore to assess about awareness and educate them about e-learning platforms, and we found that of 300 students, 120 were males and 80 were females and majority 52% are of the age group of 20–22 years. In Table 1, test of association applied is Fischer exact test. The p value came out to be <0.001 showing significant increase in knowledge about e-platform. Before the intervention, only 53% were having knowledge about e-learning, but after intervention, it increased to 100%. In Table 2, Chi-square test value is 18.718, $P < 0.001$, which shows that there was significant increase in number of students with correct understanding about e-learning after intervention. In Table 3, Chi-square value is 31.472, $P < 0.001$ which shows that there was significant increase in students using e-platform after intervention. Table 4 shows the reason for preference of conventional platform versus e-platform. In Table 5, Chi-square value is 56.161, $P < 0.001$ which shows significant increase in students finding e-platform useful in their academic purposes. In Table 6, Chi-square value is 30.058, $P < 0.001$ which shows that there was a significant increase in students with thought of using e-learning in near future.

Before intervention, only 13% of students were using applications for the purpose of e-learning, but after intervention, 54% of students started using applications for

Table 1: Response for knowledge about e-learning

Knowledge about e-learning	Pre (%)	Post (%)
Yes	159 (53)	300 (100)
No	141 (47)	0 (0)
Total	300 (100)	300 (100)

Table 2: Response on understanding about e-learning

Understanding about e-learning	Pre (%)	Post (%)
Correct	75 (25)	123 (41)
Incorrect	225 (75)	177 (59)
Total	300 (100)	300 (100)

Table 3: Students' opinion on conventional versus e-platform

Better platform	Pre (%)	Post (%)
Conventional	141 (47)	33 (11)
E-platform	159 (53)	267 (89)
Total	300 (100)	300 (100)

Table 4: Reason for preference of conventional platform versus e-platform

Why conventional platform	Pre (%)	Post (%)
Better understanding	18 (6)	0 (0)
More informative	135 (45)	204 (64)
Less stressful	84 (28)	54 (18)
Less time consuming	63 (21)	54 (18)
Why e-platform	Pre (%)	Post (%)
Easy to retain	84 (28)	51 (17)
Simple explanation	126 (42)	120 (40)
More informative	54 (18)	27 (9)
Easy availability	36 (12)	102 (34)

Table 5: Response on e-platform helpful in academic purposes

E-platform helpful	Pre (%)	Post (%)
Extremely helpful	24 (8)	144 (48)
Helpful	198 (66)	156 (52)
Less helpful	78 (26)	0 (0)

Table 6: Response on using e-platform in near future

Use in near future	Yes (%)	No (%)
Pre	159 (53)	141 (47)
Post	267 (89)	33 (11)

this purpose. Before intervention, 34% of students were not using e-platforms, but after intervention, it decreased to only 8% of students. Before intervention, 70% of students were using e-platform for <2 h, but after intervention, 85% of students were using e-platforms for >2 h.

DISCUSSION

In the present study, we found that only 53% of students having knowledge about e-learning and only 25% of students were having correct understanding about e-learning, and after educational intervention, the percentage increased by 100% and 41%, respectively. 53% of students who were using e-platforms before intervention which increased to 89% after intervention, 12% of students used e-learning because of its easy availability but after intervention it increased to 34%. In the present study, only 13% of students were using applications for the purpose of e-learning, but after intervention, 54% of students started using applications for this purpose. Before intervention, 70% of students were using e-platform for <2 h, but after intervention, 85% of students started using e-platforms for >2 h; 61% of students thought e-platform to be not helpful, but after intervention, it decreased to 11%; 45% of the students came to know about various e-learning platforms after our intervention. Of 300 students before intervention, only 53% of students were having a thought of using e-learning in near future, but after intervention, it increased to 89%.

Before the intervention of 300 students, only 53% were having knowledge about e-learning, but after intervention, it increased to 100%. While a study by Bashorun *et al*.[6] and Adisa revealed that 95% of users have awareness of electronic information services provided by the library, which is quite high in comparison with the present study, another study by Dilek-Kayaoglu[7] stressed that one of the barriers to the use of e-resources as reported by 42.7% of the respondents in the study is lack of awareness of e-resources services in their library, which is in line with the present study. In the same line, Ogunyade and Oyibo[8] in their study examined the use of Medline database of life sciences and biomedical bibliographic information by medical students at the University of Lagos and concluded that the use of the database was poor due to lack of awareness.

Before intervention, of 300 students, only 25% of students were having correct understanding about e-learning, but after intervention, it increased to 41%. Similarly, Chizmar and Walbert[9] reported that choices related to the learning experience were positive, as learners were free to choose from a diverse learning experience the approach that would suit them most Poole"s[10],

In the study of 300 students, there were 53% of students who were using e-platforms before intervention which increased to 89% after intervention. As e-learning and learning management system (LMS) can be used in one of the fundamental key points of students' teaching/learning experience which is students' assessment, this study investigated students' perspective to the online tests through designing an online test in each course using different assessment modalities: Multiple choice questions, extended matching items, and short answer questions. The participation in the test was not compulsory yet the response rate was 92%.[11] This observation was in line with present.

In the present study, only 12% of students used e-learning because of its easy availability, but after intervention, it increased to 34%. In contrast to our findings, Egberongbe[12] study showed that 80 (71.4%) postgraduate students and 55(78.6%) research scholars were aware of e-resources. Ahmad and Panda[13] study results revealed that majority of the faculty members were aware of and used e-resources.

The present study shows that of 300 students before intervention, only 13% of students were using applications for the purpose of e-learning, but after intervention, 54% of students started using applications for this purpose. Similarly, Aina[14] revealed that the highest usage point of any databases among academic staff of Babcock University was <17%.

In the present study, before intervention, 61% of students thought e-platform to be not helpful, but after intervention, it decreased to 11%. After intervention, 45% of the students came to know about various e-learning platforms, and 53% of students were having a thought of using e-learning in near future, but after intervention, it increased to 89%. In contrast to the present study, the researcher found that more than 70% of the students believed that the online test had helped them to: Identify their knowledge gaps in the course, clarify areas of focus while studying the course/module, identify areas of strength and weaknesses in their knowledge, facilitate their understanding of the lectures and teaching materials, and increase their awareness of the learning objectives/outcomes of the course/module.[15] In the study by Liyang Son[g][16] stated that, provide overviews of the tools used for the course or hands on workshops with the technology used in online learning tools; provide support to the students and ease their stress by letting them understand that the problems do exist and is going to happen – most likely at the most inconvenient time. A successful and enjoyable LMS and e-learning experience should be accompanied by strategies to improve the access to the Internet and computer and improve the broadband width, and these findings are in line with the present study.

Small sample size and involvement of only government medical college student are the limitation of the present study; we can find more relevant and significant data if we conduct it on a much larger scale.

CONCLUSION

In the present study, we come to know that only 53% of students have knowledge about e-learning and 25% of students have correct understanding about e-learning which is quite low as per the present scenario, but when we educate them through educational intervention, the numbers tremendously increase in favor of e-learning. With study findings, we conclude that most of the students liked and want to use e-learning platforms for their education and academics.

REFERENCES

1. Clegg S, Tan J, Saeidi S. Reflecting or acting? reflective practice and continuing professional development in higher education. Reflective Pract Int Multidiscip Perspect 2002;3:131-46.
2. John MK, Katsuaki S. Learner motivation and E-Learning design: A multinationally validated process. J Educ Media 2004;29:229-39.
3. Tamrakar A, Mehta KK. Analysis of effectiveness of web based E-Learning through information technology. Int J Soft Comput Eng 2011;1:55-9.
4. Zhang D, Zhao JL, Zhou L, Nunamaker JF, Jr. Can e-learning replace classroom learning? Commun ACM 2004;47:75-9.
5. Masic I. E-Learning as new method of medical education. Acta Inf Med 2008;16:102-17.
6. Bashorun MT, Isah A, Adisa MY. User perception of electronic resources in the University of Ilorin, Nigeria. J Emerg Trends Comput Inf Sci 2011;2:554-62.
7. Dilek-Kayaoglu H. Use of electronic journals by faculty at Istanbul University, Turkey: The results of a survey. J Acad Librariansh 2008;76:89-100.
8. Ogunyade TO, Oyibo WA. Use of CD-ROM medline by medical students of the college of medicine, University of Lagos, Nigeria. J Med Internet Res 2003;5:7.
9. Chizmar JF, Walbert MS. Web-based learning environments guided by principles of good teaching practice. J Econ Educ 1999;30:248-64.
10. Poole DM. Student participation in a discussion-oriented online course: A case study. J Res Comput Educ 2000;33:162-77.
11. Eldeeb RA. Students' Perceptions to e-learning. IOSR J Res Method Educ 2014;4:33-6.
12. Egberongbe HS. The use and impact of electronic resources at the University of Lagos. Library Philos Pract 2011;1. Available from: http://www.webpages.uidaho.edu/~mbolin/egberongbe.htm. [Accessed on 2018 Jan 21].
13. Ahmad M, Panda KC. Awareness and use of electronic information resources by the faculty members of Indian institutes in Dubai international academic city (diac): A survey. Int Res J Comput Sci Inf Syst 2013;2:8-17.
14. Aina RF. Globalized database: Availability and utilization of internet resources forteaching and research by academic staff of Babcock University. Program on Policy, Conflict and Strategic Studies. Int J Ser 2009;1:10-20.
15. Lim EC, Ong BK, Wilder-Smith EP, Seet RC. Computer-based versus pen-and-paper testing: Students' perception. Ann Acad Med Singapore 2006;35:599-603.
16. Song L, Singleton ES, Hill JR, Koh MH. Improving online learning: Student perceptions of useful and challenging characteristics. Educ Resour Inf Center 2004;7:59-70.

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