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Awareness and utilization of massive open online course (MOOC) and video series as continuous learning tools for faculties

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Abstract

Background: Medical knowledge is expanding everyday with increasing complexity of the health-care system. For that, it is important for faculty to have self-motivation for their update and self-development. Self-directed learning in today's scenario is mostly done by online learning or e-learning. Of many tools, massive open online course (MOOC) is a relatively new phenomenon blooming the adult learning. They fill the role of continuous education and professional development.

Objective: To find out the awareness and use of MOOC and educational video series by the medical faculties.

Materials and Methods: It was a questionnaire-based cross-sectional study. Thus, predesigned and pretested questionnaire forms were distributed to faculty members of a medical school. Questionnaires were about usage of information technologies and Internet tools, various messaging and discussion tools, and use of MOOC and video series by medical faculties. The filled up forms were collected, and statistical analysis was done by using Microsoft Excel.

Result: A total of 108 faculty members participated in the study. More than 64% participants were using Internet more than 5 h per week. Among all participants, 63.89% participants were using online messaging and discussion tools such as email, google and yahoo groups, blogging, forums, and others. Awareness of MOOCs and web portal such as edX, coursera, Udacity, and others was only 18.52% (20) among the faculty members. Of them, 14 reported that they had enrolled in such courses at least once. Of 108 faculties, 25 were aware of availability of educational video series, and 22 reported using video series.

Conclusion: Use of Internet and online discussion tool for educational purpose is very good among the faculty members. But, the study shows that the awareness of online learning tools such as MOOCs and educational video series are very low among faculty members. However, after some awareness program, they will start using these resources for self-directed learning.

KEY WORDS: Massive open online courses (MOOCs), educational video series, faculty self-learning

Introduction

The expanding volume of medical knowledge and the increasing complexity of the health-care system is making

medical profession more challenging day-by-day. Medical faculties of medical education institutions are doing pioneering role in medical education and medical science, and that is a noble way to serve society. They require continuous faculty development programs for the purpose of adapting new technologies, coping with changing work conditions, and increasing their ability toward research and teaching skills. So, it is important that faculties should have self-instinct for their own update and development. Online learning or e-learning is now a day becoming wonderful tool for self-directed learning.^[1]

E-learning is defined as the usage of Internet technologies to enrich knowledge and performance. It involves distant learning and computer-assisted instruction, especially to learners

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who are at remote locations from the central teaching site. E-learning technologies can efficiently answer to quickening global competition, surge the quality of learning experiences, eliminate situational barriers, and be more cost-effective.^[2,3] Other alternative terms include online learning, computer-assisted instruction, and Internet-based learning.^[4,5]

Massive Open Online Course (MOOC) is one of the very important tool for self-directed learning. MOOCs are a relatively new phenomenon blooming the adult learning. MOOCs are built on the characteristics of massiveness, openness, and connectivity philosophy. It is a self-organizing complex system and one that implies a system is willing to transform every time with new information.^[6] MOOCs are playing the role of continuous education and ongoing professional development, helping to fulfill personal intellectual curiosity or increase the workplace skills of postgraduates.^[7] The large-scale nature of MOOCs push the envelope of using discussion forums, e-mails, and social networking tools as means for communicating differently and innovatively.^[8] The platform provided by MOOCs can facilitate the medical faculties to keep learning, which help in improving their knowledge and skills. The literature regarding faculty development by promotion of e-learning through MOOC as evidence of scholarly pursuit is very scarce to our knowledge; however, as noted earlier, e-learning requires faculty competencies that go beyond traditional instructional activities. Furthermore, by its nature, e-learning offers learners and instructors the possibility of widespread use, access, and sharing unmatched by other types of instruction.

So, this study was designed to find out the awareness and use of very important tools for online self-directed learning MOOCs and video series by the medical faculties act as continuous learning tool.

Materials and Methods

It was a questionnaire-based cross sectional-study. The questionnaire was prepared and validated by experts. After that, a pilot study was conducted by random distribution of the questionnaire form to 10 randomly selected participants. The questions were modified based on the responses and feedback from the participants. Thus, a predesigned, pretested questionnaire was prepared. Human Research Ethics Committee permission was taken before starting the study.

The data were collected from the GMERS Medical College, Valsad, Gujarat, India. A total number of 130 faculties and residents was selected randomly and invited to participate in the study. They were informed about the nature of study. After taking the informed written consent, the participants were enrolled in the study. Then, their knowledge was assessed quantitatively and qualitatively by using predesigned questionnaire. The questionnaire was divided in four parts. One part contained five questions about demographic information of the participants. Second part contained six questions about use of computer, other information technologies, tool, and Internet. Third part was about use of online messaging,

discussion, and other tools. Then, the last part contained eight questions about the awareness and utilization of free online courses and/or offline video series. The participants were given 20 min to fill up the forms. The filled up forms were collected, and data were analyzed by using Microsoft Excel.

Result

A total of 130 faculty members were invited to participate in study. Among them, 108 faculty members submitted the complete questionnaire. The age of participants varied from 25 to 55 years of age. Nearly 94% (101) of participants fell in between 26 and 40 years of age, with the most common age group as 31–35 years of age [i.e., 37% (40)]. Gender-wise distribution shows that, of 108 participants, 74 (68.52%) were male and 34 (31.48%) were female subjects.

Use of Technology

Question of duration of use of computer shows varied answer of 3 years to 16 years. However, most common answer was 10 years, and 38 (35%) participants were using since 10 years. Approximately, 80% (86) participants were using computer system few times a week to daily. About 85.18% (92) participants were using Internet daily to several times a week. Hours per week use of Internet varied among the participants from 0.5 to 36 h. Most of the participants [i.e., 49.07% (53)] were using Internet 1–5 h per week.

Use of Online Messaging/Discussion Tool

About 63.89% participants were using online messaging and discussion tools such as email, google and yahoo groups, blogging, forums, and others. About 53.7% (58) participants were using it few times a week to daily. Of 108, nearly 83% (90) participants were routinely (i.e., several times a weeks to daily) using messaging or chatting tools such as email, text message, WhatsApp, or others.

Use of MOOC and Offline Video Series

Only 20 (18.52%) faculties of 108 were aware of the availability of online free courses and websites such as edX, coursera, MIT Open Course Ware, and others. Of them, 14 reported having enrolled in the courses at least once [Figure 1]. However, data about completion of the course were not inquired. Of 108 faculties, 25 were aware of availability of offline video series. Of that, 22 reported using videos from youtube, Kaplan video series, Dr. Ghanashyam Vaidya and Dr. Najeeb's video lectures, and others [Figure 2].

The comparison of the Internet usage pattern per week and awareness and utilization of MOOC found that, most of the faculties [i.e., 61 (56.5%)] were using Internet less than or equal to 5 h per week. However, the awareness and utilization of MOOC was high in participants using Internet more than 5 h [Table 1].

Table 1: Comparison between use of internet per week and MOOC/offline videos by medical faculties

Internet use (h/week)	Total faculties	MOOC		Offline video series	
		Aware	Utilize	Aware	Utilize
≤2	31	0	0	5	4
3–5	30	4	3	6	5
6–10	24	7	5	5	5
11–15	13	6	4	6	5
>15	10	3	2	3	3
Total	108	20	14	25	22

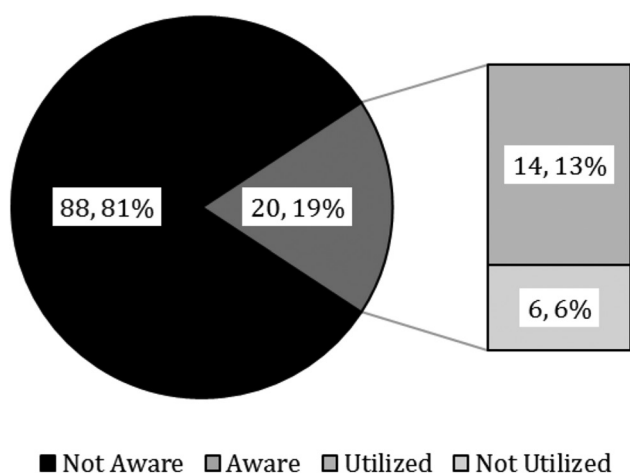


Figure 1: Awareness and utilization of online free courses (MOOC).

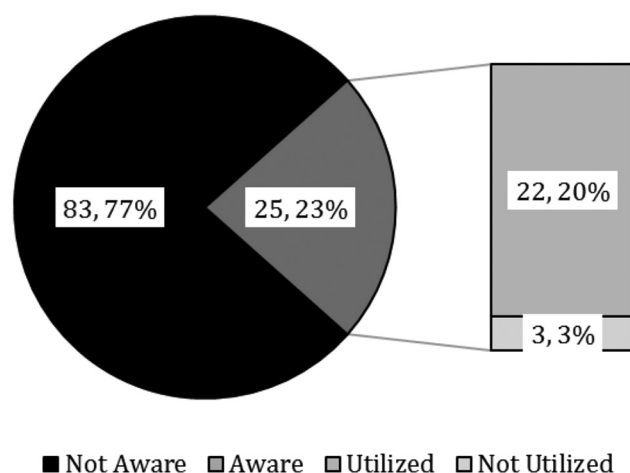


Figure 2: Awareness and utilization of offline video series.

Discussion

Existing and emerging e-learning technologies are having intense, immediate, and disruptive transformations on education systems;^[9] nowhere is the impact felt more than on the

practitioners who teach. Increased demand for online learning options coupled with fast evolution of technology and pedagogy necessitates an equal growth in the quality and quantity of online facilitation training for faculty to ensure effective online educational experiences.^[10] For that, educators must be friendly and aware of this emerging e-learning system.

Computer literacy was very good with all faculties in present studies and very well literate with use of computer system. They were using computer system since last 3 years to 16 years. Faculty members in study done by Parameshwar and Patil^[11] were using Internet since last 2 years or more. However, in this study, duration of Internet use was not enquired, but, by this data, it can be stated that they must be using computers since more than 2 years. Routine use of Internet shows that nearly half of the participants were using Internet 1–5 h a week, which is quite similar to the study by Parameshwar and Patil. Study done by Siamian *et al.*^[12] shows Internet use by faculties are very near, with 60.2% faculties using Internet <2 h per day. Most of the participants were accessing Internet at home and not at work. In contrast, a study by Siamian *et al.* shows that most of the faculties were accessing Internet at work. It was found that there was no wi-fi Internet facility in the hospital and college building. This might be the reason for less utilization Internet and, so, the online learning tools. However, similar finding with more Internet access at home by faculties (87%) was seen in other study done by Bediang *et al.*^[13] Most of the participants were using Internet mostly for social networking sites. However, 64% participants in this study were using online messaging and discussion tools such as email, groups, forums, and blogging, which is mostly for educational purpose; this is slightly more than the study by Parameshwar and Patil,^[11] in which 58% of participants were using Internet for educational purpose.

The most important aspect of this study was to check the awareness and utilization of MOOC and video series available online and offline. It provides free access to the courses that allowed students to obtain a level of education. This has changed the face of education. Many reputed universities are making their distance learning courses on MOOC bases and now including MOOC in their routine curriculum. They are also providing these MOOCs free of cost through various portals such as coursera, edX, Udacity, and many more.

But, the finding of this study shows that awareness of these courses among the faculties is very scarce, with only 18.52% (20 of 108) aware.

Moreover, study by Radford *et al.*^[14] shows that only 24% of health staff of their organization heard about or aware of MOOCs, which is quite similar to this study. However, 14 (70%) faculties among aware in this study had enrolled once or more for these courses. This shows that low awareness of open online courses among the faculties is the main issue. Moreover, if they become aware, they enroll for it and can utilize it for their self-development. Similarly, use of online and offline videos are also quite good among them if they know it.

Strength

Faculty development should be an integral part of medical education. However, it is a very much neglected part, and this study will provide a platform to do further study on that way.

Limitations

Intervention such as demonstration of the websites, which provide free online courses, could not be done owing to time constrain.

Conclusion

Use of internet and online discussion tool for educational purpose is very good among the faculty members. The study shows that the awareness of online learning tools such as MOOCs and educational video series are very scarce among faculty members. However, once they become aware, they tend to make use of these resources for self-directed learning. So, it is important to spread awareness about this free online learning tool such as MOOC and educational video series, and, for that, workshops or seminars should be organized by medical institutions.

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