

An Empirical Study of Faculty Perceptions of Massive Open Online Courses (MOOCs)

* **Amala A. Patwardhan**

****Akhilesh K.S. Yadav**[#]

*Research Scholar, Centre for Library & Information Management Studies (CLIMS), Tata Institute of Social Sciences, Mumbai (Maharashtra) 400088, INDIA; Email: amalapatwardhan@gmail.com; ORCID: <https://orcid.org/0000-0002-6391-6935>

**Assistant Professor, Centre for Library & Information Management Studies (CLIMS), Tata Institute of Social Sciences, Mumbai (Maharashtra) 400088, INDIA; Email: akhilesh.yadav@tiss.edu; ORCID: <https://orcid.org/0000-0002-5037-1577>

Corresponding author.

Received: 30 August 2022

Accepted: 05 November 2022

Abstract

This paper aims to understand the views and perceptions of college teachers on Massive Open Online Courses (MOOCs). Teachers who are one of the major education stakeholders have their own set of experiences and perspectives regarding MOOCs. Their involvement in MOOCs phenomena could be two-fold; the first being a learner for individual and professional development and the second as the instructor in the MOOC programme. Hence this study seeks to understand their approach to looking at e-learning. This empirical study has surveyed the teachers about their perceptions of MOOCs. A structured web questionnaire was prepared to collect the data from the participants. Snowball sampling was used to collect feedback from the respondents. The questionnaire was circulated widely, and eighty-seven (87) teachers from the Degree colleges in Mumbai responded to it. The study finds that college teachers are aware of the MOOCs concept and opt for MOOCs for personal and professional growth. Very few of them are playing their role as instructors and recommending MOOCs to their students. However, the completion rate of the teachers is meagre. Hence institutions could take positive steps in this regard. They are spreading the word of awareness about e-learning through workshops, seminars etc. Nevertheless, they lack concrete policies in that direction. MOOCs is a recent phenomenon in education that has gained wide popularity worldwide. Despite its low awareness and high dropout rate, young learners are attracted to it. This study would help the institutional policymakers for MOOCs that can create a favourable environment for e-learning to flourish as an essential tool for learning in the 21st century.

Keywords: MOOCs, e-learning, web-based learning, electronic learning, online learning, blended learning, higher education.

1. Introduction

MOOC is one of the recent phenomenon in the context of the education system across the globe. Through MOOCs, learners can pursue the courses on a variety of topics according to their own pace. It facilitates wide enrolment of learners to the courses of varied interest from any corner of the globe with no geographical boundaries. The concept has increasing relevance due to its massiveness and openness, as the name suggests. Dave Cormier coined the term MOOC. The first MOOC came into existence in 2008 at the University of Manitoba (Imber, 2014).

Though the concept of MOOCs was initiated in 2008, it gained real momentum in the year 2012 when MIT launched its first MOOC. The advancements in ICT helped the process to gear up, and the innovative teaching-learning platform could reach the masses. On the international platform, many developing and developed countries are making use of this innovative learning medium. India has already secured the second position in making use of MOOCs. India is the second country after the US to use MOOCs effectively (Chauhan & Goel, 2017). In a country where rigid teaching styles and university slots are scarce, students are attracted to MOOCs. Many of the courses offered in India do not ensure employability (Lamba, 2019). The courses offered online help learners acquire specific skill sets useful for career enhancement. The number of students pursuing higher education by 2035 is likely to exceed 520 million. This growth is fuelled by the transformations that we have been witnessing in the developing and emerging countries of the world, and it will only accelerate in the following decades (United Nations Educational, 2016). This development of the higher education sector is possible only due to technology-enabled learning. MOOCs are the newest form of education that harness ICT effectively.

MOOC is defined as a massive open online course (MOOC) is a model for delivering learning content online to any person who wants to take a course, with no limit on attendance (Mazoue, 2013). According to Kurt (2018), MOOCs are asynchronous, open-access, Web-based courses geared toward enrolling hundreds or thousands of students at a time. MOOCs deliver content via recorded video lectures, online readings, online assessments, and various degrees of student-student and student-instructor interaction.

Types of MOOCs: Broadly, two types of MOOCs have been established; cMOOCs and xMOOCs. cMOOCs are based on the learning theory of Connectivism, which emphasizes the power of networking with other individuals, gleaning from diverse opinions, and focusing on end-goals as the foundation of learning. Instead of being structured as an open online community of learners, xMOOCs are based on a more traditional classroom structure: They are a combination of pre-recorded video lectures with quizzes, tests, or other assessments. xMOOCs are centred around a professor rather than a community of students (What is the Difference Between xMOOCs and cMOOCs? 2013).

Benefits of MOOCs to the society

MOOCs offer broad participation in higher education. The rising number of enrolments to MOOCs proves demand for such courses. In the context of MOOC, learning is not confined to any geographical boundaries. People from any corner of the globe could participate in the courses. MOOCs facilitate equality in and democratization of education. Free education to disadvantaged groups is ensured through MOOCs as they provide open access to quality education to all. Once higher education has reached the masses, it would help society's economic, cultural, and social development. MOOCs ensure the overall development of society. MOOCs possess the potential to reduce education costs. Since many MOOCs provide free courses to all, irrespective of the geographical and economic barriers, the costs of receiving education from top institutions are reduced.

Limitations of MOOCs

Even though MOOCs can educate unprivileged groups, limited access to technology in remote areas creates a huge barrier. Some MOOC providers do not offer free services to all learners. Lack of digital literacy and required skills might be an obstacle. In the case of developing countries, language and cultural diversities might make it impossible for the

learners to take the courses from western universities. MOOCs are not formally linked to higher education systems. There is no formal mechanism that could replace the regular university courses. Efforts have already started that would address these shortcomings. In India, UGC has made a formal declaration with respect to connecting the formal courses with MOOCs (University Grants Commission, 2021).

MOOCs provide enormous opportunities for developing countries like India to reach the places where the formal education system cannot reach. Various Indian platforms for MOOCs have been established in recent times. Below is a brief account of significant efforts initiated in India:

- The project NPTEL was launched in 2003. It is a project by MHRD with the support of IITs and IISc. It offers courses for Computer Science, Electrical, mechanical engineering, management, humanities etc.
- MOOKIT was launched in the year 2012 by IIT Kanpur.
- IIT Bombay launched IITBombayX in 2014. It offers blended learning through which prime universities in India offer MOOCs courses to Indian local college learners.
- SWAYAM is the most significant initiative in recent days, established in 2016. This system attempts to integrate itself into the formal education system as per UGC guidelines. As per these guidelines, 40% of the course credits will be generated from the MOOCs offered on SWAYAM.
- agMOOCs consortium is the first MOOCs platform in India dedicated to specific subjects. It has designed various courses on agriculture in collaboration with IIT Kanpur and Commonwealth of Learning (COL), Canada.
- Apart from the MOOCs offered by reputed educational institutions, certain MOOC platforms came into existence launched by profit-making agencies. Apna Course and MyBSchool are among those. These significant efforts mentioned here show that Indian academicians have realized the potential and importance of MOOCs and are keen on their development.

In recent years MOOCs have been gaining increasing popularity across the globe as the way or mode of e-learning. The awareness about MOOCs among the students is rising and they are enrolling on various MOOCs. Especially during the pandemic, when all the educational institutions in the world were shut down and online learning was the only option left, more people would turn up to MOOCs that allow them to learn at their own pace at their locations.

2. Review of Literature

The researchers have reviewed some recent MOOC studies to gain the background for this study. Specific studies are available related to the theoretical understanding of MOOCs. Also, survey-based studies are available about awareness of MOOCs, motivations to use MOOCs, experiences of different stakeholders about MOOCs, and the role of library professionals in the context of MOOCs. Some of these studies are attempted to review in the following section. This section will end up identifying a gap in the existing literature.

Awareness of MOOCs

Muzafarova (2014) after surveying the university in Georgia, reports that despite having the availability of necessary tools, the awareness and use of MOOCs are meagre. Another study conducted in Nepal suggests that being an underdeveloped country, Nepal has great potential to benefit from MOOCs. However, the awareness is still very low. However, since significant universities in Nepal are planning to implement MOOCs, Nepal will be successfully using

MOOCs in future (Shakya et al., 2016). The Nigerian University study reports that MOOCs participation is low due to less awareness and inadequate infrastructure for internet connectivity (Adebo & Ailobhio, 2017). Awareness about MOOCs among student teachers of Bachelor of Education (B.Ed) courses is significantly less, as reported in Shaikh's (2017) study. The study suggests that, if guided properly, the student teachers could effectively use MOOCs. According to Kundu and Bej (2020), teachers gradually become aware of MOOCs. Their awareness and experiences about MOOCs vary on several parameters such as their location, faculty, gender, etc.

As stated earlier, India is the second-largest user of MOOCs after U. S. penetration of MOOCs is high in IITs, IIMs and other top universities. However, other universities and institutions in India are not aware of the concept. With respect to the research conducted in Tier 1 and Tier 2 cities of Karnataka (Nagasampige et al., 2015), awareness about MOOCs is higher in the universities located in tier 1 than in tier 2. Awareness is higher among the teachers of Engineering and Management than in Humanities. Motivation factors to take up the MOOCs are fulfilling current needs, preparing for the future and satisfying curiosity. However, the dropout rate is high. In the study conducted at the university at Hyderabad, Shaikh (2017) reports that the awareness about MOOCs is very low. The perceptions about MOOCs are negative. However, the usage may increase after making them aware of the concept. The study by Singh & Chauhan (2017) reports that the awareness of MOOCs among teacher educators is low and sincere efforts are necessary to increase the awareness.

Learners' Retention/ Drop Out

At present, MOOCs face the problem of high dropout rates. Abeer & Miri (2014) have suggested that real-time detection of dissatisfied users and the design of better and more engaging courses may increase the retention rate. One major factor that explains a student's MOOC completion is his degree of interaction with other students, particularly his reputation. These are the significant factors for MOOC's completion (Navio-Marco & Solorzano-Garcia, 2021). As Greene et al. (2015) reported, students' prior education level is the major determinant in their retention in MOOCs.

Motivation for using MOOCs

The survey conducted by the researchers at Duke University shows that students' motivations typically fell into one of four categories viz. a) To support lifelong learning or gain an understanding of the subject matter, with no particular expectations for completion or achievement b) For fun, entertainment, social experience and intellectual stimulation c) Convenience, often in conjunction with barriers to traditional education options d) To experience or explore online education (Belanger & Thornton, 2013). Another study in China by Yin (2016) reports that students in China enrol for MOOCs mainly to gain more knowledge, improve skills, and expand specialized knowledge. They find superior quality content convenient learning environment. However, students are not satisfied with the quality of peer assessment and learners' active participation in the discussion forum. The study in Israel by Aharony & Bar-Ilan (2016) reveals that perceived usefulness and ease of use are the major motivational factors to enrol in a MOOC. They also found that students have different needs and expectations. So, the MOOCs platforms should provide multiple options to accommodate these needs.

Zhang et al. (2015) has identified four broad types of student motivation for joining MOOCs: fulfilling current needs, preparing for the future, satisfying curiosity, and connecting with

people. Jin (2020) suggests MOOCs Students' Dropout Prediction (SDP) model. This SDP model can predict the student's dropout status for a single course in MOOC based on the students' learning behaviour features. Almatrafi et al. (2018) highlight that one of the factors for students dropping out from MOOCs is an inadequate response to their questions on the discussion forum. Hence authors coin a model to identify the posts that need immediate attention. The model has the base of data mining to extract the text.

Experiences of MOOCs

Alraimi et al. (2015) reported the users' have experienced; perceived reputation, openness, usefulness, and overall satisfaction. Similar findings have been reported by Peng & Xu (2020) that MOOCs in China are influenced by their subjective norms and the perceived usefulness of the course. Another study conducted by Abeer & Miri (2014) in the same country reported that students had good experience learning in a MOOC. Features of MOOC that attracted the students are clarity of explanations, visualization of abstract concepts, support, communication and a variety of assignments. Also, openness, flexibility, learners' involvement, availability of curated material, and lifelong learning process are the perceived advantages of MOOCs (Rao et al., 2015). Studies also reveal the disadvantages such as access to technology, assessment based on just multiple-choice questions, and lack of standards (Rao et al., 2015). Naidu and Barbera (2014) report that there is no accreditation process for MOOCs.

Cole and Ph (2015) report the mixed experiences of the users. Students have a positive attitude toward MOOCs as they offer open and flexible platforms for learning, and they are sceptical about the quality of content being offered. Also, the lack of accreditation is a point of concern for them. According to the study by Murray (2014), the openness of MOOCs is highly appreciated. However, the sense of 'tutor presence' is missing. Short videos would be effective. The higher education institute may provide financial and technical support to the teachers to enhance their skills through MOOCs. Providing time and including MOOCs certification as one of the parameters of appraisals will motivate the teachers to adopt MOOCs (Bhaskar et al., 2021). Postgraduate students' experiences with MOOCs are revealed to be positive. User-friendliness, accessibility and sharing opportunities are the most significant attributes of MOOCs. MOOCs enabled them to engage meaningfully, interact with others and receive immediate feedback, which enabled them to improve their practice (Abd Majid et al., 2019)

The study conducted by Kappas and Tsolis (2018) in Greece shows that MOOCs are conceptualized as a significant environment for teachers' professional development. Faculties in engineering colleges in Karnataka (India) have experienced a positive impact of MOOCs on their knowledge and career prospects (Vysakh, 2020). Shailaja and Prathikantham (2018) report that students and faculty in engineering colleges are positive about the use of MOOCs. According to users, variability and interactivity play an essential role in MOOCs. More users will be motivated to use MOOCs in the near future. According to Bordoloi et al. (2020), MOOCs have reached only a smaller section of society. A good amount of groundwork is needed by the educational policymakers while introducing and integrating MOOCs in traditional education to gain the benefits of the MOOCs concept.

MOOCs and COVID-19 Pandemic

The pandemic forced the world to shut down almost all educational institutions and teaching-learning started happening in online distance mode. The stakeholders started exploring more

viable options of effective teaching-learning among all available avenues. Though the educational institutions knew about MOOCs and their use much before, it was not prioritized until the outbreak of the COVID-19 pandemic. As the pandemic is dominating the predominant service sector, “the education industry”, affecting millions of students, the importance of MOOCs has arisen (Shankar Raja and Kallarakal 2020). The study conducted during the pandemic suggests that students are not fully aware of the MOOCs concept, but they find it interesting and are willing to use it during the phase of distance online learning (Purkayastha and Sinha, 2021). According to the study by Impey and Formanek (2021), MOOC enrollment surged after the pandemic’s crisis began. As Singh and Sharma (2021) reported in the management institute case study, MOOCs were used as an alternative to the internship programmes for the management students.

Research gap

After reviewing various studies related to MOOCs, it was found that limited studies focus on teachers’ perceptions of MOOCs. As reflected by Misra (2018), MOOCs possess a high potential for the professional growth of teachers. Due to their openness and massiveness, MOOCs could contribute to the professional development of the teachers positively. However, there are very few empirical studies that reveal the teachers’ actual experiences and how the teachers have explored MOOCs’ potential. Hence this study intends to reveal the perceptions and views about MOOCs among the degree college teachers in Mumbai.

3. Research Methodology and Scope

The present study is exploratory research that uses survey method to study the perceptions of college teachers regarding the MOOCs phenomena. For this population chosen for the study, snowball sampling technique was used to gather data from undergraduate and postgraduate faculties in Mumbai and Thane district. This study is based on a survey method, and the web questionnaire was circulated to the teachers. The names of the colleges covered under the study are 1. DSPM’s K.V. Pendharkar College of Arts, Science and Commerce; 2. Royal College of Arts, Science and Commerce; 3. Model College of Commerce and Science; 4. CHM College of Arts, Science and Commerce; 5. SIA College of Higher Education; 6. Satish Pradhan Dnyanasadhana College 7. Abhinav Degree College 8. VPM’s Joshi Bedekar College; 9. Mulund College of Commerce; 10. SIES College of Arts, Science and Commerce; 11. B. N. Bandodkar College of Science; 12. Ruia College; 13. Bharat College of Commerce and Science; and 14. Pragati College of Arts, Science and Commerce.

The data has been collected from the teachers of above listed fourteen degree colleges belong to the science, arts and commerce disciplines. The web questionnaire was circulated widely through email to the teachers in contact and they were requested to fill-up and also forward the same questionnaire to their colleagues. Total, eighty-seven (87) teachers responded to the questionnaire through web questionnaires and online circulation. After collecting data from the teachers, it was analyzed and discussed. This discussion is included in the present paper.

4. Research Aims and Objectives

Teachers being the most significant component of the education system, studying their understanding and perceptions of MOOCs would be significant. Are they considering MOOCs as a part of their professional development? What are their experiences while learning about MOOCs? What advantages are they gaining? What difficulties or challenges they are facing? are the questions worth exploring. Also, it is necessary to know their

engagement in the creation of MOOCs. Hence the study will try to understand teachers' overall association with the concept of MOOCs. The following research objectives are framed for this research study:

- To explore the extent of awareness about MOOCs among the teachers.
- To understand the usage of MOOCs by the teachers for their personal and professional development
- To understand the perceptions of the teachers on MOOCs

Considering these objectives, the questionnaire was designed with questions on various aspects of MOOCs from college teachers' perspectives. Likert scale-based questions were also included to understand the teachers' perceptions. The responses were analyzed, and the findings are discussed below.

5. Results and Discussions

Demographic description of the respondents

Out of the total respondents, the majority are female teachers (56). This could be because the questionnaire was widely circulated among the teachers in acquaintance, and most of them were female teachers. Considering respondents' qualifications, maximum teachers possess postgraduate degrees in Arts faculty. Also, 32.18% of the respondents are PhD holders. The majority of the teachers who participated in the survey were assistant professors with teaching experience of 11 to 20 years.

Table 1: Demographic profile of respondents

Gender	Frequency	Percentage (%)
Male	31	35.64
Female	56	64.36
Qualification		
Qualification	Frequency	Percentage (%)
MA	23	26.44
MSc	21	24.14
MCom	15	17.24
PhD	28	32.18
Faculty		
Faculty	Frequency	Percentage (%)
Science, Technology, Engineering and Mathematics (STEM)	27	31.04
Arts/Humanities/ Languages	32	36.78
Commerce/Management/ Law	28	32.18

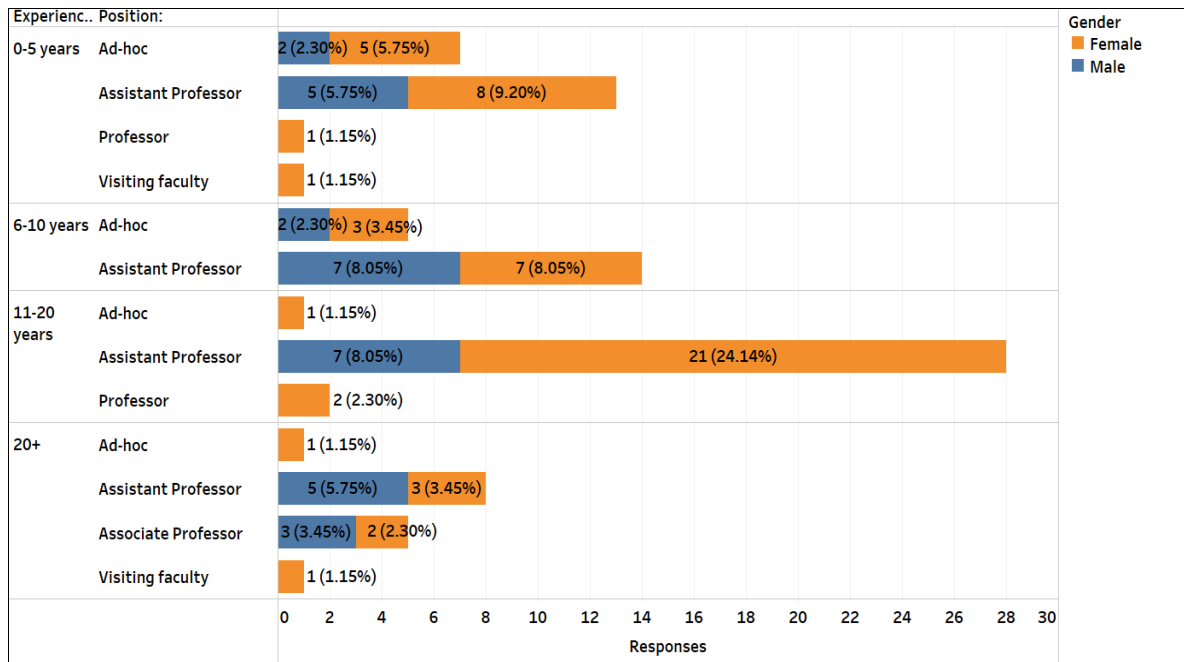


Figure 1: Respondents' experience and designation

Awareness of the MOOCs

From the result, it is seen that 96.55% of the teachers are aware of the concept of MOOCs, but very few of the teachers are not at all aware of MOOCs. This means the awareness about MOOCs is high among the teachers. Very few of the teachers do not know anything about it. From the data represented above, the question arises if any relation exists between teachers' teaching experience and their awareness levels. Figure 2 could answer this. However, all the teachers in the 0-5 years and 20+ are aware of the concept. The data also indicates teachers' awareness of MOOCs regarding their faculty. The teachers from Commerce, Management and Law, are more aware of MOOCs than Arts, Humanities, Language and STEM categories. Awareness of MOOCs among the Arts, Humanities and Languages teachers is very low. This could be due to regional language teachers in this category. Most of the MOOCs are available in English.

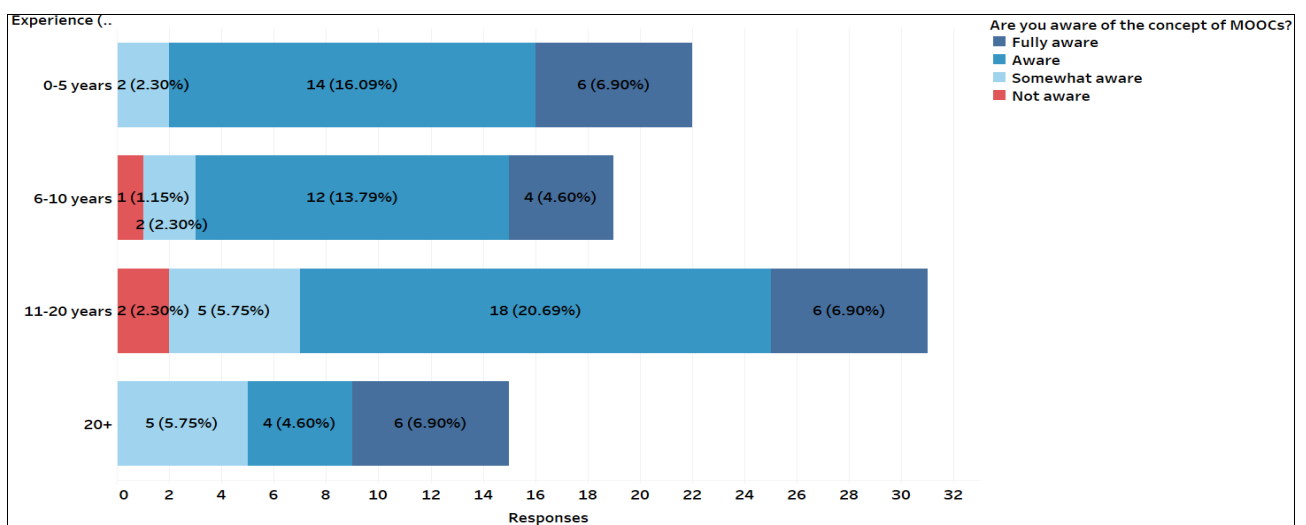


Figure 2: Respondent's experience and level of awareness

The participants were asked about the source of awareness about MOOCs. The result shows that most of the teachers (43.8%) came to know about MOOCs from the lectures or workshops they attended. Also, 34% of the teachers became aware of MOOCs through the Internet itself. 30% of the teachers received the orientation about MOOCs from their institutions. 18% of the teachers received information about MOOCs from their friends/colleagues. This shows that institutions are keen on spreading MOOCs' knowledge among the teachers. They are conducting various awareness programmes like lectures and workshops to create awareness about MOOCs. That means the idea of MOOCs is widely getting accepted by institutions. Formal or informal discussions about MOOCs are taking place at the campuses. Also, the teachers are actively using the resources from the Internet to gain knowledge about MOOCs as it is one of the latest developments in the education sector.

Familiarity with different MOOCs platforms

Figure 3 shows that Swayam is the most familiar platform among the other popular MOOCs providers such as Coursera, Udemy, and edX. Swayam is a project by the Ministry of Education, Govt. of India. UGC has been promoting the use of Swayam. The courses initiated by Swayam are either low cost or free of cost. Hence use has been at a rising level. Also, they are offering Faculty Development Programmes like short term courses or refresher courses that are extremely relevant to the professional development of the teachers. After Swayam, Coursera, Udemy and EdX are the most familiar platforms. EdX, FutureLearn and Iversity are the least familiar MOOCs platforms.

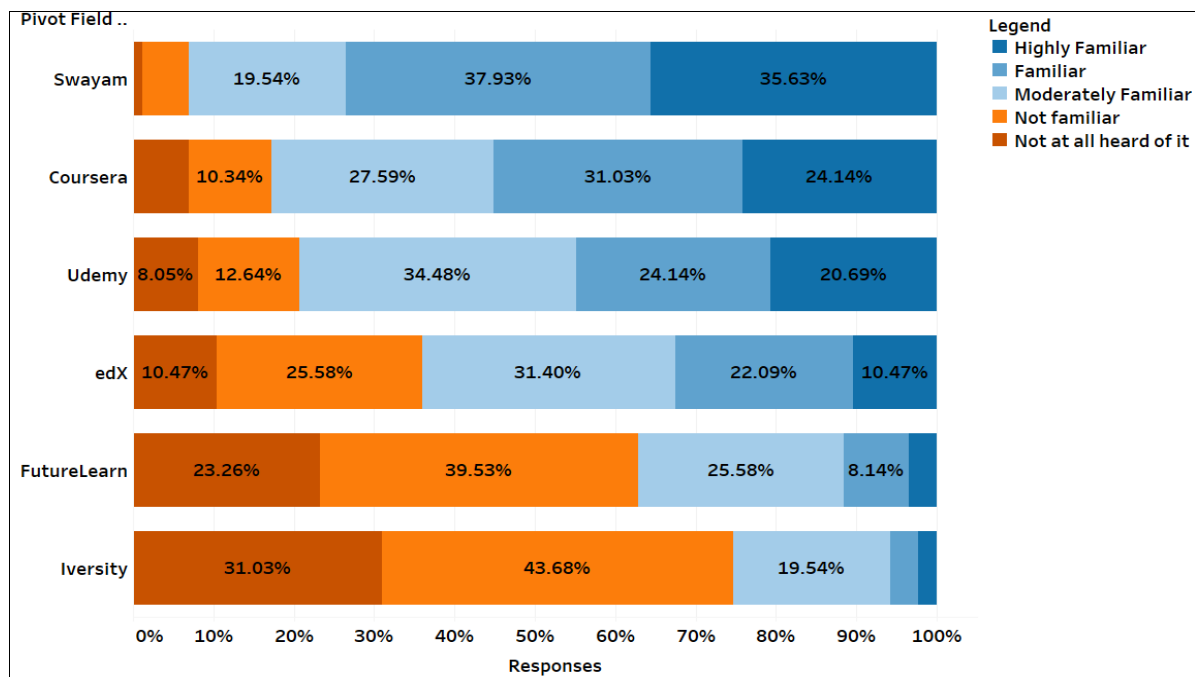


Figure 3: Familiarity with popular MOOCs platforms

For how long are you using MOOCs?

Below, Figure 4 clearly states that most respondents (44) have started using MOOCs in the last couple of years. Very few participants have been using the MOOCs for more than two years (17). Among the total respondents, there are many participants (26) who have not at all used the MOOCs. That means the overall use of MOOCs by the teachers is still very low. Even though awareness of MOOCs among the teachers is high, its actual use is still very low.

The use has gradually increased during the pandemic. Since there was a remarkable shift from traditional classroom teaching to online teaching, the inclination toward learning through MOOCs has increased.

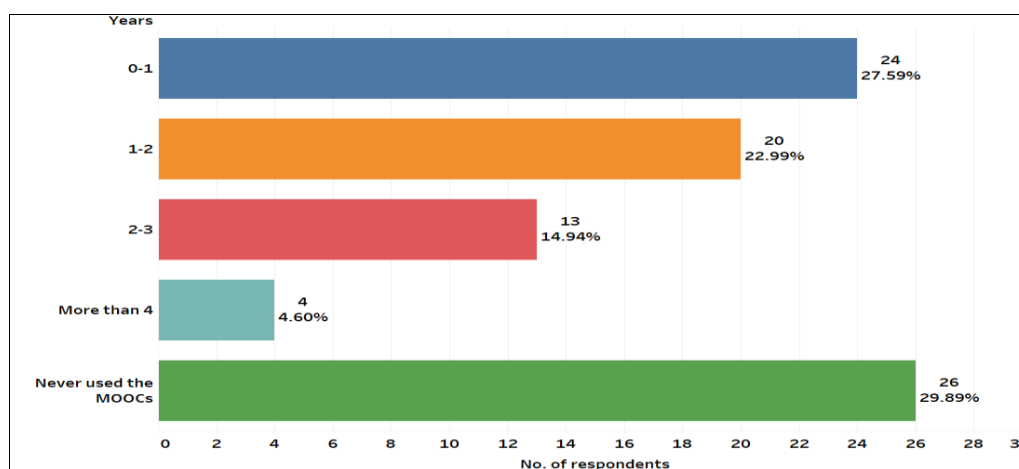


Figure 4: Duration of using MOOCs platforms

The findings suggest that only 13% of the respondents have completed the MOOCs they enrolled in any course. 62% of the teachers did not complete even a single course. 25% of them could complete only some of the courses they registered for. Many of the previous studies report this challenge of low retention rate in the context of MOOCs. Considering this extremely low completion rate of MOOCs worldwide, one should attempt to understand the reasons behind this. The respondents have noted various reasons for non-completion. The most prominent reasons amongst them are:

Lack of necessary infrastructure: The teachers do not possess the necessary infrastructure for internet connection or devices to attend the MOOCs lectures at their workplaces or otherwise. Since teachers find MOOCs programmes helpful in their teaching career, they must be provided with the required infrastructure and facilities for learning.

Less motivation due to lack of direct interaction with the teacher: Lack of face to face or synchronous interaction is lacking in MOOCs. In MOOCs programmes, the lectures are pre-recorded, and the learner attends them at their own pace. On the one hand, it offers flexibility to the learners; however, on the other hand, it results in the disconnect between the instructor and the learner, which is one of the reasons for dropping out.

Quality of the content was not meeting the expectations: After registering for MOOCs, teachers find that the quality of content is not meeting their expectations. Before registration, the content listed in the introduction part did not prove helpful, so they could not complete the course.

Content delivery was not very effective: The teachers did not find the content delivery to be effective. The pre-recorded lectures are sometimes lengthy and monotonous. So, the content is not delivered effectively. Hence teachers do not feel motivated to complete the course they enrolled for.

These issues need to be addressed by the institutions and MOOCs creators. The barriers reported by the teachers should be thought of while designing the MOOCs so that the retention rate would be higher in the future.

It was found that even though the teachers are completing the course, all of them are not keen on earning the certificate of those courses. This could be because for some of the MOOCs certificates are gained only when the fees are paid. Learning is open and free on MOOCs. However, one needs to pay the complete fees for earning the certificates.

As stated above, Swayam and Coursera are the most familiar platforms as the teachers highly prefer them. Researchers asked the following question: What type of MOOCs have you completed so far? The result shows that those teachers are considering MOOCs for their professional development. They are considering MOOCs for learning certain new ideas and concepts pertaining to their subject of specialization. Apart from this, completing refresher courses through MOOCs is also the priority of many teachers as part of their professional growth. For refresher courses, the teachers do not visit any university as they used to be in the past. By spending some amount of time per week, they can complete the courses. Also, teachers are interested and going for MOOCs for their interests and hobbies. As MOOCs provide courses on a broad spectrum of topics and disciplines, many learners are attracted to them. This kind of learning for leisure would have been otherwise difficult. That shows that doing MOOCs courses for personal and professional development has equal importance.

The respondents report very few; only 15.2% of institutions have a concrete policy regarding MOOCs. The majority of the institutions lack this well-framed policy in the context of MOOCs. The institutions are adopting various means and methods for creating awareness about MOOCs. However, well-framed policy decisions would bring out an impact on the use of MOOCs.

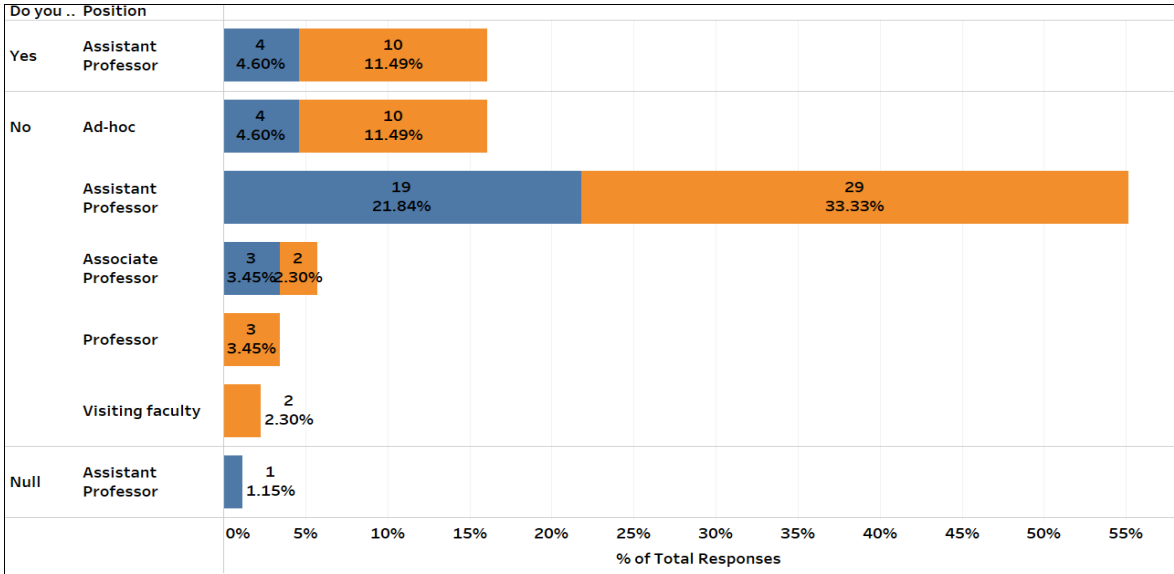


Figure 5: Institutions have concrete policy regarding MOOCs

The benefits of MOOCs

The respondents were asked to provide their opinion on the benefits of MOOCs. Despite the lower usage rate, the teachers have realized various benefits of MOOCs. In the present study, teachers have reported some important advantages of MOOCs. They are as follows:

- MOOCs allow us to keep pace with changes in technology-enhanced learning and innovative pedagogies.
- Opportunity to learn from global teachers with global peers.

- MOOCs help satisfies intellectual curiosity.
- MOOC has taught various new skills and expertise that could not be gained through any other mode. It has the potential to contribute to my professional growth significantly.
- MOOCs are helpful in teaching career.

The problems with respect to MOOCs

Besides various benefits experienced by the teachers, they come across certain challenges in the context of MOOCs:

- Lack of time is the major challenge with respect to MOOCs.
- Technical difficulties, including low internet connectivity, are another important challenges.
- Length of the course and lack of facilities for completing the course.
- Also, necessary training is lacking in the case of some teachers.
- Some teachers have reported a lack of interest as one of the barriers to learning on MOOCs.

Whether MOOCs are an opportunity or a threat?

Despite several challenges reported by the respondents, with a considerable high rate of dropout and very less usage level, teachers are still considering MOOCs as an opportunity. The teachers who think MOOCs as a threat are negligible. With the number of advantages of MOOCs, teachers perceive MOOCs as opportunities in their professional and personal lives. MOOCs are a recent phenomenon in education. Considering the significant virtues of MOOCs to provide open online education with great flexibility, a vast number of learners are getting attracted to them. Its potential is to be explored.

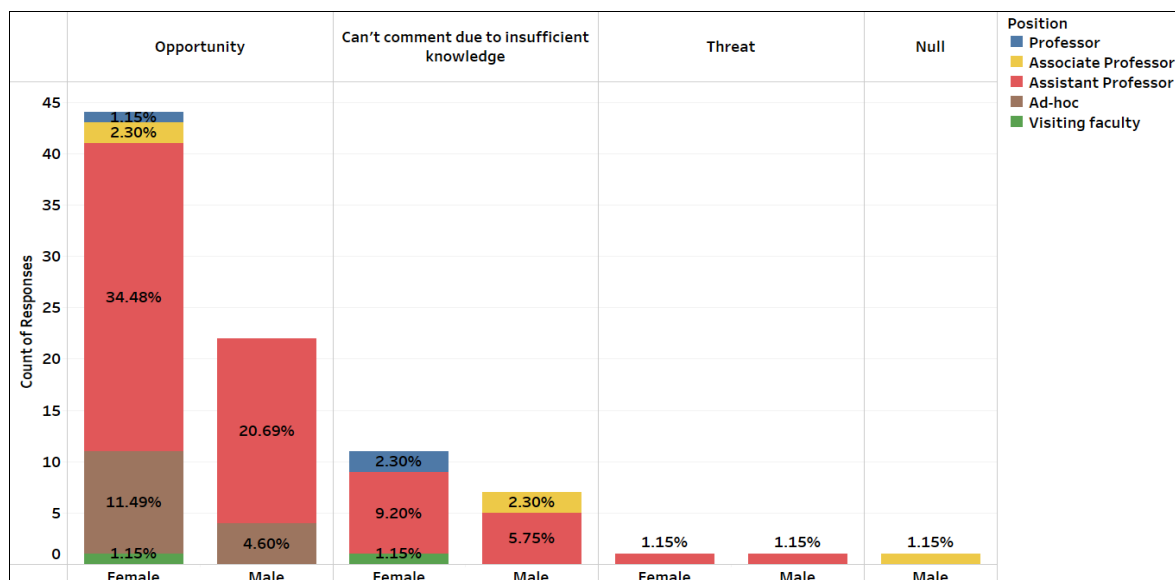


Figure 6: Whether MOOCs are an opportunity or a threat?

Other perceptions with respect to MOOCs

The teachers are positive about recommending certain MOOCs to their students and they encourage the students to pursue those courses. As teachers have realized the importance of

MOOCs from the career development perspective of students, they encourage the students to take maximum advantage of the wide range of MOOCs available. As many colleges allow students to earn extra credits for MOOCs, it is beneficial to the students to complete the MOOCs. While considering teachers' self-motivation toward MOOCs completion for their professional development, almost one-third of the teachers assert that they lack self-motivation and need some external motivation to complete the MOOCs. The majority of the teachers (36.78%) are indifferent to the completion of MOOCs.

Table 2: Perceptions with respect to MOOCs

Statements	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
I recommend certain MOOCs to my students and encourage them to pursue those courses	26 (29.88)	48 (55.17)	11 (12.64)	2 (2.29)	0 (0)
I need some external motivation towards completion of MOOCs.	11 (12.64)	28 (32.18)	32 (36.78)	8 (9.19)	8 (9.19)
My interest towards MOOCs accelerated during the pandemic	15 (17.24)	45 (51.72)	14 (16.09)	5 (5.75)	8 (9.19)
I am comfortable with MOOC even though synchronous interaction is lacking	10 (11.49)	25 (28.73)	37 (42.53)	15 (17.24)	0 (0)

The MOOCs concept came into existence much before the pandemic. Nevertheless, teachers agree that their interest in MOOCs has accelerated during the pandemic during the last two years. Since the educational institutions were closed and online teaching-learning was the only effective alternative left, there was a natural inclination towards exploring MOOCs. Though learning happens asynchronously in MOOCs and direct interaction with the instructor is lacking, teachers are either comfortable or neutral towards this feature. Very few of the teachers are not comfortable with this asynchronous interaction.

6. Findings of the Study

From the above discussion on the results of the study, following findings could be stated: Awareness about MOOCs is very high among the teachers. Only the teachers from social sciences and languages are less aware about the idea of MOOCs. The comparatively new teachers with the experience upto 5 years along with the senior teachers with the experience of more than 20 years are deeply aware of the MOOC concept.

While the teachers are aware of the MOOCs, they are registering for different MOOCs for the purpose of personal and professional development. Especially the use of MOOCs has increased during the pandemic. The study also finds that even though the enrolment for MOOCs is high, the drop-out rate is also very high. Very few teachers are able to complete the courses they enrol for. The reasons for this drop out are also revealed in the study. Lack of necessary infrastructure, less motivation due to lack of direct interaction with the instructors and peers, course quality not matching the expectations, ineffective content quality are the major hurdles in completing the MOOCs.

Another major finding of the study is the perception towards MOOCs. Teachers' overall perception about MOOCs is positive. Even if current use of MOOCs is low, they are keen about its use as they understand the potential of MOOCs as an important tool in their career development. It was found that, very few institutions have well framed institutional policy for MOOCs, teachers are involved in formal/ informal interactions, discussions with their colleagues and students. They are keen about encouraging students to participate in MOOCs. Hence, we can say that, the overall use of MOOCs is low today, there would be rise in the future as the teachers are not only ware about it but also are interested and proactive about its usage.

7. Conclusions and Suggestions

The study finding above assert that, that teachers are well aware of the MOOCs concept. Currently, the use of MOOCs is low, with a high dropout rate. Nevertheless, teachers are getting attracted to MOOCs for personal and professional growth. The perception of MOOCs among the teachers is positive. They understand the importance of MOOCs in terms of their capacity to offer training from global teachers, the innovative pedagogies they offer, and their capacity to satisfy intellectual curiosity. Hence, they recommend MOOCs courses to their students. So despite the low completion rate, teachers look at MOOCs as an opportunity rather than a threat.

Institutions are keen on spreading awareness about MOOCs among the teachers, which is a good indication. However, institutional policy regarding MOOCs is not in place. Very few institutions have policies for promoting learning through MOOCs. The study proposes a number of recommendations at institutional level:

The institutions can take MOOCs initiative in several ways like:

- Conducting extensive training programs for the teachers and students at the institutional level.
- Motivating the teachers to participate in MOOCs as a learner as well as facilitator/instructor.
- Making necessary infrastructure and resources available to them to increase their participation.
- Rewarding teachers who have completed a good number of MOOCs and acquired significant knowledge and skillsets.
- Making arrangements at the policy level to include credits drawn from MOOCs for students' grades.
- MOOCs have several shortcomings, including high dropout being the major challenge. Institutions could address this by encouraging mass registrations for certain significant courses and teachers could complete them while enjoying collaborative learning.

This study could be concluded by saying that interest in MOOCs has been rising with increasing awareness over the last couple of years as e-learning has replaced traditional classroom learning (O'Connor, 2015). Since teachers' perceptions about MOOCs are positive, if institutions take greater initiative in framing and implementing certain concrete policies about MOOCs, they could be used by the teachers and students more effectively.

References

1. Abd Majid, F., Kamarudin, R., & Zamin, A.A.M. (2019). Postgraduate students' perception of Massive Open Online Courses (MOOCs) in enhancing their learning experience. *International Journal of Education and Literacy Studies*, 7(4), 101-105. Available at: <https://doi.org/10.7575/aiac.ijels.v.7n.4p.101>
2. Abeer, W., & Miri, B. (2014). Students' preferences and views about learning in a MOOC. *Procedia - Social and Behavioral Sciences*, 152, 318-323. Available at: <https://doi.org/10.1016/j.sbspro.2014.09.203>
3. Adebo, T., & Ailobhio, T. (2017). Massive Open Online Courses awareness and adoption by Nigeria University students: A case study. *International Journal of Computer Engineering and Information Technology*, 9(3), 41-46.
4. Aharony, N., & Bar-Ilan, J. (2016). Students' perceptions on MOOCs: An exploratory study. *Interdisciplinary Journal of E-Skills and Lifelong Learning Interdisciplinary Journal of e-Skills and Life Long Learning*, 12(12), 145-162. Available at: <https://doi.org/10.28945/3540>
5. Almatrafi, O., Johri, A., & Rangwala, H. (2018). Needle in a haystack: Identifying learner posts that require urgent response in MOOC discussion forums. *Computers & Education* 118, 1-9. Available at: <https://doi.org/10.1016/j.compedu.2017.11.002>
6. Alraimi, K.M., Zo, H., & Ciganek, A.P. (2015). Understanding the MOOCs continuance: The role of openness and reputation. *Computers & Education*, 80, 28-38. Available at: <https://doi.org/10.1016/j.compedu.2014.08.006>
7. Berlinger, Y., & Thornton, J. (2013). *Bioelectricity: A quantitative approach duke university's first MOOC*. Duke University. Available at: https://dukespace.lib.duke.edu/dspace/bitstream/handle/10161/6216/Duke_Bioelectricity_MOOC_Fall2012.pdf
8. Bhaskar, P., Joshi, A., Dayalan, P., & Ibra, Oman. (2021). Investigating inhibiting factors affecting MOOCs adoption among teachers in higher education institutions of India. *Business Excellence and Management*, 11(2), 87-94. Available at: <https://doi.org/10.24818/beman/2021.11.2-06>
9. Bordoloi, R., Das, P., & Das, K. (2020). Lifelong learning opportunities through MOOCs in India. *Asian Association of Open Universities Journal*, 15(1), 83-95. Available at: <https://doi.org/10.1108/AAOUJ-09-2019-0042>
10. Chauhan, J. (2017). An overview of MOOC in India. *International Journal of Computer Trends and Technology*, 49(2), 111-120. Available at: <https://doi.org/10.14445/22312803/IJCTT-V49P117>
11. Cole, A. W., & Ph, D. (2015). What do current college students think about MOOCs? *Journal of Online Learning and Teaching*, 11(2), 188-202.
12. Greene, J. A., Oswald, C. A., & Pomerantz, J. (2015). Predictors of retention and achievement in a massive open online course. *American Educational Research Journal*, 52(5), 925-955. Available at: <https://doi.org/10.3102/0002831215584621>
13. Imber, J. (2014). *The history (and future) of MOOCs*. 1-5. Available at: <http://shift-learning.co.uk/wp-content/uploads/2018/06/MOOC-White-Paper.pdf>
14. Impey, C., & Formanek, M. (2021, August 12). *MOOCs and 100 days of COVID: Enrollment surges in massive open online astronomy classes during the coronavirus pandemic*. Elsevier Enhanced Reader. Available at: <https://doi.org/10.1016/j.ssaho.2021.100177>
15. Jin, C. (2020). MOOC student dropout prediction model based on learning behavior features and parameter optimization. *Interactive Learning Environments*, 1-19. Available at: <https://doi.org/10.1080/10494820.2020.1802300>

16. Kundu, A., & Bej, T. (2020). Perceptions of MOOCs among Indian state university students and teachers. *Journal of Applied Research in Higher Education*, 12(5), 1095-1115. Available at: <https://doi.org/10.1108/JARHE-08-2019-0224>
17. Kurt, S. (2018, May 19). Massive open online courses (MOOCs) & definitions. *Educational Technology*. Available at: <https://educationaltechnology.net/massive-open-online-courses-moocs-definitions/>
18. Lamba, P. (2019). *Have A Degree But No Job-BW Education*. Retrieved October 13, 2022, from <http://bweducation.businessworld.in/article/Have-A-Degree-But-No-Job-/08-07-2019-172960/>
19. Mazoue, J. (2013, January 28). *The MOOC Model: Challenging Traditional Education*. *EDUCAUSE*. Educause Review. Available at: <https://educationaltechnology.net/massive-open-online-courses-moocs-definitions/>
20. Misra, P. K. (2018). MOOCs for Teacher professional development: Reflections and suggested actions. *Open Praxis*, 10(1), 67-77. Available at: <https://doi.org/10.5944/openpraxis.10.1.780>
21. Murray, D. J.-A. (2014). Participants' perceptions of a MOOC. *Insights: The UKSG Journal*, 27(2), 154-159. Available at: <https://doi.org/10.1629/2048-7754.154>
22. Muzafarova, T. (2014). Survey of awareness of massive open online courses (MOOC): A case of International Black Sea University students, Georgia. *Journal of Southeast European and Black Sea Studies*, 3(2), 15-19.
23. Nagasampige, M., Subbaiah, G. D., & Nagasampige, K. (2015). *MOOCs in Indian University education System: A study on awareness and motivation among students and teachers of Indian Universities*. Available at: <https://www.researchgate.net/deref/http%3A%2F%2Fwww.scdl.net%3AInternationalConference%3APDFS%3ADigitalProceeding>
24. Naidu, S., & Barbera, E. (2014). Special themed issue: Assessment and accreditation in MOOCs. *Digital Education Review*, 25, 1-6. Available at: <https://revistes.ub.edu/index.php/der/article/download/11324/pdf/0>
25. Navio-Marco, J., & Solorzano-Garcia, M. (2021). Student's social e-reputation ("Karma") as motivational factor in MOOC learning. *Interactive Learning Environments*, 29(3), 458-472. Available at: <https://doi.org/10.1080/10494820.2019.1579237>
26. O'Connor, S. (Ed.) (2015). *Library Management in Disruptive Times: Skills and Knowledge for an Uncertain Future*. Facet Publishing, London.
27. Peng, X., & Xu, Q. (2020). Investigating learners' behaviors and discourse content in MOOC course reviews. *Computers & Education*, 143, 103673. Available at: <https://doi.org/10.1016/j.compedu.2019.103673>
28. Purkayastha, N., & Sinha, M. K. (2021). Unstoppable study with MOOCs during Covid 19 pandemic: a study. *Library Philosophy and Practice*, 1-12. Available at: https://media.proquest.com/media/hms/PFT/1/OnnKI?_s=H%2BjcOFq4ri%2FPGaK3N%2Bc5Blgq5%2F8%3D
29. Rao, P.N., Komaraiah, M., & Reddy, P.N. (2015). *A case for MOOCs in Indian Higher Education System*. *Journal of Engineering Education Transformations*, 29(1), 15-25. Available at: <http://www.journaleet.org/index.php/jeet/article/view/77104>.
30. Shaheen Altaf Shaikh. (2017). Student teacher awareness of MOOCs - Massive Online Open Courses. *International Journal of Educational Science and Research (IJESR)*, 7(6), 105-110.
31. Shailaja, J., & Prathikantham, S. (2018). Survey on understanding the implications of MOOCs in engineering education. *Journal of Engineering Education Transformations*, 31. Available at: <https://doi.org/10.16920/jeet%2F2018%2Fv0i0%2F120929>

32. Shakya, M., Shrestha, S., & Manandhar, R. (2016). Awareness of MOOC among college students: A study of far western region of Nepal. *International Conference on E-Learning for Development, August, 1-10*.
33. Singh, A., & Sharma, A. (2021). Acceptance of MOOCs as an alternative for internship for management students during COVID-19 pandemic: An Indian perspective. *International Journal of Educational Management*, (ahead-of-print). Available at: <https://doi.org/10.1108/IJEM-03-2021-0085>
34. Singh, G., & Chauhan, R. (2017). Awareness towards massive open online courses (MOOCs) and their usage for teacher education in India. *Asian Journal of Distance Education*, 12(2), 81-88.
35. UNESCO. (2016). *Making Sense of A Guide for Policy-Makers Making Sense of* (p. 98). Available at: <https://unesdoc.unesco.org/ark:/48223/pf0000245122>
36. University Grants Commission. (2021, May 28). *UGC Letter regarding: 83 UG and 40 PG SWAYAM MOOCS to be offered in July-October Semester, 2021*. Available at: https://www.ugc.ac.in/ugc_notices.aspx?id=NDE2OQ==
37. Vysakh, C. (2020). MOOCs: Adoption, perceived benefits and hurdles among the engineering faculties of Karnataka. *Technolearn An International Journal of Educational Technology*, 10(2). Available at: <https://doi.org/10.30954/2231-4105.02.2020.10>
38. *What is the Difference Between xMOOCs and cMOOCs? - Online Education Blog of Touro College*. (2013). Retrieved October 14, 2022, from <https://blogs.onlineeducation.touro.edu/distinguishing-between-cmoocs-and-xmoocs/>
39. Yin, Y. (2016). *Chinese learners' perceptions of MOOCs: a case study* (Doctoral dissertation, Heinrich-Heine-Universität Düsseldorf). Available at: <https://docserv.uni-duesseldorf.de/servlets/DerivateServlet/Derivate-41685>
40. Zhang, J., Perris, K., Zheng, Q., & Chen, L. (2015). Public response to “the MOOC Movement” in China: Examining the time series of microblogging. *The International Review of Research in Open and Distributed Learning*, 16(5). Available at: <https://doi.org/10.19173/irrodl.v16i5.2244>

