Influencing factors of the learners' motivation inMOOCs: Systematic Review

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Abstract. Massive Open Online Courses (MOOCs) are open online courses that anyone can take without certain prerequisites. An identity that represents a large, open, online MOOC. MOOCs have brought about significant changes in the global education system by providing access to high-quality educational resources for millions of people around the world regardless of time and place, but not a few are unable to complete their studies at MOOCs. This study explains what factors influence students' motivation to learn MOOCs. Themethod used in this study is a systematic analysis by collecting some appropriate literature from various digital databases such as Google Scholar andScopus. The questions posed in this study are 1) what is the role of self-regulation MOOCs on student learning motivation 2) the effect of communication patterns in MOOCs on student learning motivation 3) the factors that influence student learning motivation. The results of a systematic analysis of several literatures to answer these questions found that 1) self-regulation influences student motivation 2) good communication patterns that are built influence student motivation in MOOCs and 3) external factors have a strong influence on student motivation in MOOCs.

Keywords: MOOCs, Motivation, Systematic Review.

1 Introduction

1.1 Emergence of MOOCs

The industrial revolution influenced many aspects of human life, altering how people live and work (Siregar & Aswan, 2019). We are now living in the Fourth Industrial Revolution. One of the consequences of the Fourth Industrial Revolution is the increased need for labor and human resources with specialized skills and knowledge (Siregar & Aswan, 2019). Education can meet these needs, of course, the education in question is education that is easily accessible. Education is a very important need for individuals (Zulkifly et al., 2022). Global investments in Open Educational Resources (OER) are required to improve educational access, according to the United

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Nations Educational, Scientific, and Cultural Organization (UNESCO) (A.Qaffas et al., 2020). Massive Open Online Course (MOOC), a recent movement not far from OER, is one of the modalities of e-learning. It is, indeed, a course provided digitally.

(A.Qaffas et al., 2020) known as online learning. Online learning can supportlearning activities that can occur anytime, anywhere, and with anyone (Lasamahu et al., 2021). Education has undergone rapid changes with the emergence of Massive Open Online Courses (MOOCs). MOOCs are growing in popularity and are providing a new platform for individuals to get knowledge. MOOCs' presence and use have altered the traditional education system, impacted students all over the world, and had a significant impact on the future growth of education. MOOCs usher in a new era of open education by sharing worldwide resources and high-quality education, in contrast to traditional learning techniques. Because of the scale and diversity of learners, these distinctions provide considerable issues for MOOC providers and designers (Hu et al., 2022). MOOCs have become an integral component of modern education systems, and millions of people have participated in thousands of MOOCs given by major universities across the world.

MOOCs are defined by the audience and format. These courses are open to anyone and everyone and are not physically limited as they are completely digital and can be accessed via the Internet without any barriers. Developments in communication technology, especially the internet, mobile devices, computers, digital sensors, and recording devices (Wibawa et al., 2021), greatly support the implementation of MOOCs. They can be free or paid courses, accessible via computers or tablets, and facilitate the mass dissemination of knowledge. However, as already mentioned, students need to register for this course, as opposed to films shown on television. MOOC is a tool that can be customized to some extent by its users. Many MOOCs have a learning pace where students can follow the course at their own pace. This means that there is an initial session, new material is introduced during the session, exercises to be done each week, and quizzes and evaluations. Keeping pace and completing practice are important elements of getting certified. MOOCs are called "massive" because, without prerequisites, the number of participants can become very large. Therefore, given the "large" number of participants, MOOCs can be characterized, although it is still necessary to distinguish between those who enrolled and those who actually completed the course to the end. They are adaptable in terms of course completion time (asynchronous) and include a diverse range of participants with varying demographics and motives to engage (Chuang, 2017). The term MOOC has come to refer to a variety of methodologies and rationales for providing large-scale online learning experiences (Namestovski et al., 2018). Some MOOCs are followed by tens or hundreds of thousands of people, but this does not automatically apply to all courses. These courses are considered very large when it comes to the number of participants. However, Improving the graduation rate and retention must be begun with improvements in the online learning components (Asip et al., 2019).

1.2 Low completion of MOOCs

By the end of 2018, more than 900 institutes around the world have provided more than 11,400 MOOCs to 101 million students (Shah, 2018). MOOCs, on the other hand, have been chastised for their low completion rate (He et al., 2015). Statistics suggest that the same for 1,000 courses on XuetangX yields a similar number of 4.5% (Feng, 2019). Despite the high number of people who enroll in MOOCs, more than 90% never finish the course (Eriksson et al., 2017). MOOC retention rates range from 3 to 15% (Deshpande & Chukhlomin, 2017). The high dropout rate in MOOCs has raised concerns about their efficacy (Alraimi et al., 2015). According to the literature study, motivation is one of the primary characteristics that can influence learners' retention in MOOCs (Maya-Jariego et al., 2020). Although motivation has a big effect in MOOC completion or dropout rates, it is unclear which motivating element is meant. As a result, the purpose of this research is to identify the elements that influence student motivation in MOOC learning.

2 Method

A thorough literature review was performed in this study's methodology. A systematic literature review is the process of discovering, analyzing, and evaluating all available study material in order to provide answers to specific research questions (Kitchenham & Charters, 2007). They can provide summaries of the state of knowledge in a field, from which future research priorities can be identified; they can answer questions that individual studies cannot; they can identify problems in primary research that should be discussed in future studies; and they can generate or evaluate theories about how or why phenomena occur (Page et al., 2021). The systematic literature review was conducted in five stages: formulation of research issues, identification of relevant work, evaluation of study quality, evidence summarization, and interpretation of findings (Wibawa & Wibawa, 2019) (Fahimnia et al., 2015)

3 Result

3.1 Formulating the research problems

Although the enthusiasm to register and study at MOOCs is very high, the graduation rate can be said to be low (Abdullatif & Velázquez-Iturbide, 2020) emphasize the importance of motivation in understanding student actions in MOOCs. They found that internal motivation greatly influenced the intention to stay with the MOOC. (Tang & Chaw, 2019) conducted research that further validated the substantial correlation between participants' motivation and completion of their MOOC course. Motivating factors are used as the main reason for dropping out of school in MOOCs. This study seeks to describe the motivation that is a factor in students who cannot complete their learning at MOOCs. Research questions (RQ) are defined to maintain the focus of the review. They were designed with the help of the Population,Intervention,

Comparison, Outcome, and Context (PICOC) criteria (Kitchenham & Charters, 2007). Table 1 shows the (PICOC) structure of the research questions.

Table 1. Summary of PICOC

Population	MOOCs, MOOCs learners, MOOCs Motivation, MOOCs dropout
Intervention	Role of motivation, external motivation, self-motivation, MOOCs communication
Comparison	n/a
Outcome	The factor of the learners' motivation
Context	Studies in academia

The questions posed in this study are:
RQ1. What is the role of self-regulation on student motivation?
RQ2. What is the influence of communication patterns in MOOCs on student motivation?
RQ3. Are there other factors that affect students' motivation in MOOCs

3.2 identifying relevant work

Data collected for analysis of MOOC motivational publications from Google Scholar and Scopus database from 2010 - 2022. Three sets of keywords were used as search terms: MOOC OR MOOC motivation OR MOOCs motivation. The Scopus and Google Scholar digital databases were chosen because they have the largest number of journals in various fields of study such as Life Sciences, Health Sciences, Physical Sciences, Social Sciences, Science, and Arts and Humanities. From the Google Scholar and Scopus digital databases obtained 791 publication documents. There are 7 publications that are not in English, then there are duplications of 2 publications and around 593 publications are irrelevant. the diagram below will show the information that has been obtained from the search process with the publish or perish application to get publications from digital databases and significant assistance from the Mendeley application. Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) 2020 is intended for use in systematic reviews that include synthesis (such as pairwise meta-analysis or other statistical synthesis methods) or do not (for example, because only one eligible study is identified). The PRISMA 2020 elements apply to mixed-methods systematic reviews (which contain both quantitative and qualitative studies), however reporting criteria for the presentation and synthesis of qualitative data should also be consulted. (Page et al., 2021)

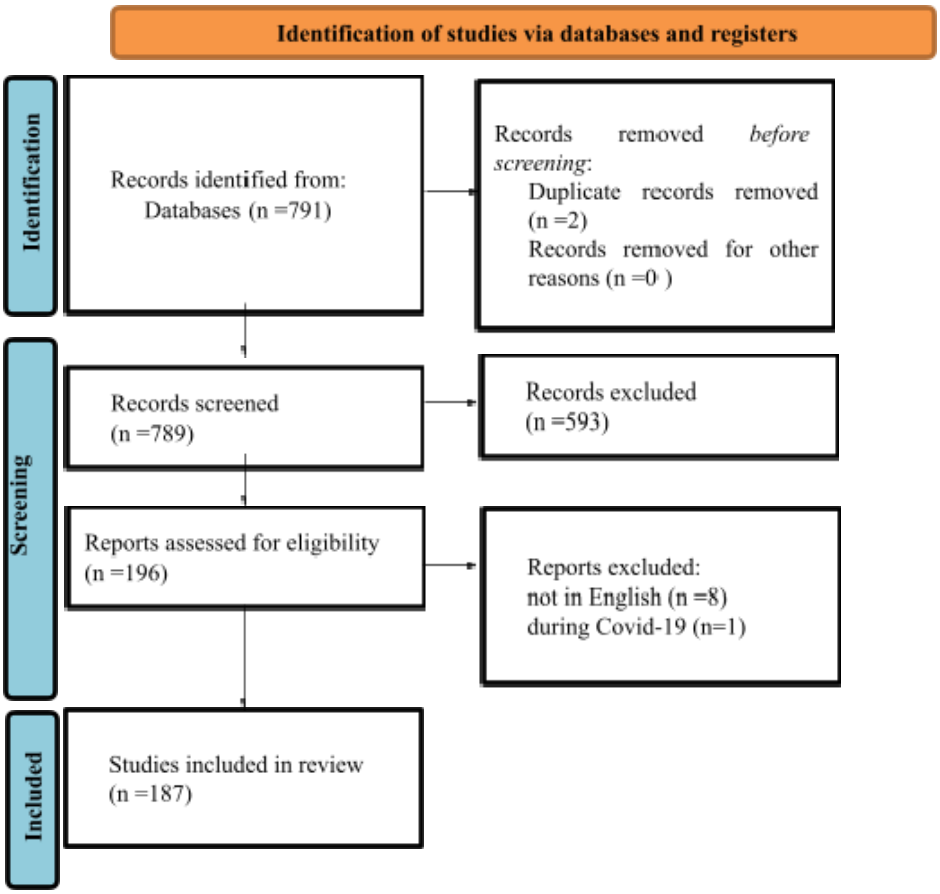

Fig. 1. PRISMA 2020 flow diagram.

3.3 assessing the quality of studies

Previous research has solely focused on certain components of user motivation in MOOCs, however this systematic literature analysis includes new publications addressing the significance of motivation in MOOC retention rates.

3.4 summarizing the evidence

There are 187 articles identified in accordance with the research that discusses student motivation in MOOCs and its relation to graduation or dropout rates in MOOC learning. Other publications that also discuss factors that contribute to students' comfort when participating in MOOCs learning and the design of MOOCs that make learning easier for participants are also available

3.5 interpreting the findings

MOOCs are a new model for providing educational services. Despite their promise, they have high dropout rates due to the low motivation of enrolled students (Abdullatif & Velázquez-Iturbide, 2020) F indings in this study suggest that many participants who could be considered dropouts (for example, because they did not complete the needed components to get a certificate) are nonetheless participating in their preferred manner (either at a slower pace or with selective engagement). It indicates that a "course" format may not be advantageous to all participants and that encouraging alternative forms of engagement and material presentation may be beneficial.(Daniel & Dropout, 2004). It was concluded that students who spent more time in the LMS would be more successful within the MOOC framework.

- Students who spend more time on the LMS are more likely to succeed in the MOOC framework.
- Students who are externally motivated spend more time in the LMS than students who are not externally motivated.
- Students spend more time on the MOOC site, potentially completing not only obligatory but also recommended tasks and other activities.
- In brief, students who are motivated not just by online information and earning certifications online, but also by offline content, in this example, points acquired during "real" (physical) courses, perform better in online learning and completion of the MOOC course.(Namestovski et al., 2018)

4 Conclusion

The results of a systematic analysis of some of the literature to answer this question found that

MOOC institutions' or developers' use of self-regulation has an impact on student motivation. Students who finished it were able to self-regulate their learning more effectively and displayed considerably greater levels of perceived efficacy and engagement with MOOC content than those who did not. Setting goals, task interests, and academic discipline affect the study completion of MOOC participants (Reparaz et al., 2020).

Good communication patterns that are built influence student motivation in MOOCs. The findings of this study indicate that integrated social features such as familiar common features and deeper peer interactions have potential value in tracking, analyzing, and generating in-depth information related to participant behavior. Different subjects of conversation and pedagogical practice foster varying amounts of 1) "serious" peer-to-peer interaction, 2) inclusion of dialogue participants, and 3) modularity, which influences information dispersion to limit 'exchange'. 'Global' education and knowledge. These findings highlight the structural limits of large-scale crowd-sourced learning as well as the numerous methods in which MOOC participants learn, as well as how learning in social situations can inspire new advancements in online education. (Gillani, 2014). external factors have a strong influence on the motivation of students in MOOCs. four main factors that influence dropping out of school: (1) students' perceptions of course content, (2) students' perceptions of course design, (3) students' situation and social characteristics, and (4) students' ability to find and manage time effectively. How learners conceptualize MOOCs has a strong impact on how they engage with content (Eriksson et al., 2017).

Academic motives play the most important role and are the most commonly employed motivational variables for MOOC retention. Academic reasons are a component of need-based motivation, and the goal of need-based motivation in registering for or completing a MOOC is to bridge gaps in individuals' knowledge, abilities, or attitudes. Learners must be motivated by a need in order to succeed in MOOCs.

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