A Look at Lecturer Experiences Designing Instruction for MOOCs

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Abstract
The MOOCs ecosystem in Southeast Asia countries varies in terms of context, objectives, and strategies, resulting in a diverse approach to implementing MOOCs. Nevertheless, developers encounter difficulties in designing online courses due to their lack of experience as online learners. Furthermore, the insufficient standards for instructional design and development, can lead to difficulties in obtaining accreditation and MOOCs recognition for academic credit. Text, visual, audio, and multimedia formats are essential for conveying information in MOOCs. Assessment quality is crucial for the effectiveness of these online learning platforms. Course developers often use existing tools in the Learning Management System (LMS) for seamless data transfer, easier course management, as well as cost effective reasons. Although fee-based assessment tools are also being considered as an option. Discussion forums allow learners to share, exchange, and confront course content, enabling learning analyses. Social media can foster online learning communities, but effectiveness depends on many variables. Video lectures used frequently as content delivery, allowing tracking and analysis of learners' engagement with the material. Thus, to effectively engage this online audience, lecturers must adapt their pedagogical approach to align with digital education principles, with particular emphasis on the way they present their content. Lectures should be meticulously structured with the target audience in mind.
Keywords: *MOOC, instructional, design, lecturers, online, course, development*

Abstrak
Ekosistem MOOCs di negara-negara Asia Tenggara ini bervariasi dalam hal konteks, tujuan, dan strategi, yang menghasilkan pendekatan beragam dalam mengimplementasikan MOOCs. Walaupun banyak pengembang kursus mengalami kesulitan dalam merancang kursus online dikarenakan kurangnya pengalaman mereka dalam pembelajaran online. Lebih jauh, standar yang tidak memadai untuk perancangan dan pengembangan instruksional, serta standar untuk platform pembelajaran, dapat menyebabkan kesulitan dalam memperoleh akreditasi dan pengakuan MOOCs angka kredit akademik. Format teks, visual, audio, dan multimedia sangat penting untuk menyampaikan informasi dalam MOOCs. Namun, format multimedia memenuhi berbagai gaya belajar, meningkatkan keterlibatan, dan sering dianggap sebagai format yang efektif untuk MOOCs. Kualitas asesmen sangat penting untuk efektivitas platform pembelajaran online ini. Pengembang kursus sering menggunakan alat yang ada di Learning Management System (LMS) untuk transfer data yang lancar, manajemen kursus yang lebih mudah, serta penghematan biaya. Meskipun alat asesmen berbayar juga terkadang dipertimbangkan. Forum diskusi memungkinkan pelajar untuk berbagi, bertukar, dan menghadapi konten kursus, yang memungkinkan analisis pembelajaran. Media sosial dapat mendorong komunitas pembelajaran daring, tetapi efektivitasnya bergantung pada kursus, siswa, dan platform. Kuliah video sering digunakan sebagai penyampaian konten. Dengan demikian, untuk melibatkan audiens daring ini secara efektif, dosen harus menyesuaikan pendekatan pedagogis mereka agar selaras dengan prinsip-prinsip pendidikan digital, dengan penekanan khusus pada cara mereka menyajikan konten mereka. Kuliah harus terstruktur dengan cermat dengan mempertimbangkan sasaran peserta.
Kata Kunci: MOOC, instruksional, desain, dosen, daring, kursus, pengembangan

INTRODUCTION

The accessibility and flexibility of Massive Open Online Courses (MOOCs) have made them increasingly popular in the education sector. The number of students in MOOCs increased from 0 in 2012 to at least 220 million in 2021 (UNESCO, 2023). The ease of organizing personalized schedules has made MOOCs very attractive to a wide range of learners, including working professionals and individuals with busy schedules. MOOCs have provided learners with the option to access free or low-cost learning content from recognized colleges and institutions worldwide, and as a result, MOOCs have become a vital aspect of modern education, giving an alternative to face-to-face learning.

The growth of MOOCs utilization has been significant. Digital transformation led the increasing of mobile subscriptions, internet users, and broadband subscriptions has facilitated the adoption of online learning platforms (Manickam, Idris, & Nipo, 2021). The resilience in the education system during COVID-19 pandemic highlighted the self-regulation learner focusing on building skill sets emerged as a significant predictor of MOOC adoption (Bawane & Harichandan, 2021). Government initiatives have played an important role in supporting the expansion of Massive Open Online Courses (MOOCs), and China's lifelong learning strategy has helped to the growth of MOOCs in the country. However, Chinese learners believe that MOOCs have had a good impact on the higher education scene without necessarily undermining the present structure (Tang & Wang, 2019).

The ASEAN area has proven excellent e-government projects, owing mostly to the availability of suitable ICT infrastructure and the proliferation of MOOCs (Apriliyanti, Kusumasari, Pramusinto, & Setianto, 2021). Indonesia is one of the Southeast Asian countries that actively promotes MOOCs, which are rapidly expanding. The Indonesian government started developing MOOCs through SPADA Indonesia in 2014, and then the Indonesian Cyber Education Institute in 2021, the country has seen an increase in MOOC use with numerous programs and institutions. In the Malaysian context, the Ministry of Higher Education (MOHE) has been very proactive in initiating and overseeing the implementation of MOOCs in Malaysian public universities since 2014. In the Malaysian Education Blueprint for Higher Education (2015-2025), the Ministry of Higher Education (MOHE) has indicated that MOOCs, as an online learning approach, is considered an interactive and engaging delivery, which increases the level of international collaboration and interaction (Noor & Aziz, 2020).

MOOCs often suffer from high dropout rates. The University of Edinburgh experienced 309,628 learner enrolments and only 34,850 learners' completions or around 11% of the enrolment. Meanwhile, Duke University conducted a Bioelectricity MOOC in 2012 with 12,175 registrations and Only 2.6% of participants attained the completion level, with feedback indicating reasons for non-completion (Onah, Sinclair, & Boyatt, 2014). Designing a MOOC that effectively engages a massive number of learners is complex. The extant MOOC literature tends to focus excessively on behavioral engagement and pay less attention to other engagement dimensions, particularly cognitive engagement (Deng, Beckendorff, & Gannaway, 2021). Issues such as poor pedagogy and low-quality assessments can undermine the effectiveness of MOOCs.

Designing a MOOC involves addressing various issues, including pedagogical strategies, logistical constraints, and technological requirements. These issues are interconnected and can constrain each other, making the design process complex (Dang, 2017). Effective MOOC design should focus on empowering learners by fostering critical thinking, collaboration, and self-regulation. This involves creating competence-based outcomes and encouraging peer assistance and assessment through social appraisal.

Engagement and interaction with learners are a key learning strategy in MOOC design so learner discussion is encouraged via forums throughout the six-week course (Goldberg & Crocombe, 2017). An appreciation of the significance of the initial learning resources can assist in the prevention of dropouts and the enhancement of prediction accuracy. This is because assessments in online courses facilitate the guidance of dropouts in learning, thereby emphasizing the necessity to redesign quizzes for cost-effective learning. a variety of considerations and challenges in MOOC design in terms of pedagogy, resources, and logistics (Zhu, Bonk, & Sari, 2018). The study highlights the importance of factors such as instructional design, assessment, and learning analysis in the effectiveness of MOOCs (Albelbisi, Yusop, & Salleh, 2018). Through exploring these aspects, the study aimed to identify the challenges and opportunities in MOOC development from the perspective of the lecturers as course developers.

METHOD

The study focuses on exploring development strategies, utilization strategies, and recognition of MOOC providers in Southeast Asian countries. Using Descriptive Study Method by using online interaction as the primary technique for this study is chosen to gain a nuanced perception of lecturer experiences. Description study as research designed which can produce a low-inference description of a phenomenon and involves interpretation, due to its attempts to minimize inferences made this method the possibility to present data as original as it possible (Sandelowski, 2000).

The data collected through online interactions within September – December 2023. 14 Lecturers as course developers from Indonesia, Malaysia, Philippines, and Thailand, were interviewed about their online courses instructional design, assessment plan, learning material, learning analysis, and assessment development. The results further analyzed using thematic analysis providing insights into the MOOCs ecosystem. The framework proposed by Miles and Huberman (1994) includes data collection, data reduction, data modeling, and drawing conclusions were performed to capture the findings.

RESULT AND DISCUSSION

With large numbers of participants and diverse backgrounds and learning styles MOOC lectures are challenging. The importance of designing MOOCs that are responsive to changing educational needs. Effective instructional design can help integrate new technologies and methodologies into MOOCs, ensuring they remain relevant and effective in a rapidly evolving educational landscape (Luo et al., 2018.). Since its introduction in 2008 the term MOOC has been employed with the intention of describing interactive learning experiences. To effectively engage this online audience, lecturers must adapt their pedagogical approach to align with digital education principles, with particular emphasis on the way they present their content. Lectures should be meticulously structured with the target audience in mind.

Instructional design in MOOCs is crucial for engaging learners and promoting meaningful learning. It involves resources, pedagogy, and logistics (Zhu, Bonk, & Sari, 2018). Some researchers encourage for participatory learning environments, peer support (Ahn, Butler, Alam, & Webster, 2013), and a collaborative community (Watson, et al., 2016), while others focus on cohort-driven design, personalizing learning, and establishing teaching presence (Malin, 2015; Walji, Deacon, Small, & Czerniewicz, 2016). An effective Instructional Design involves understanding learner needs, setting clear objectives, utilizing interactive content, promoting engagement activities, providing feedback, ensuring accessibility, assessing outcomes, and iteratively improving the course.

Conducting an analysis and feasibility study at the beginning of MOOC development ensures that the course is well-planned and has the potential to be successful. The needs analysis/feasibility studies conducted through surveys, interviews, or data analysis to obtain insights. Needs analysis helps identify the specific learning needs of the target audience, ensuring that the course content is relevant and addresses the learners' requirements (Zhu et al., 2022). Also, assess the feasibility of the course considering factors like budget, technology, and resources. Understanding learner needs allows course developers to choose appropriate instructional strategies that support effective learning as outlined in a course design.

An effective course design is essential in developing MOOCs as it aligns with learning objectives, structures content delivery, and incorporates engaging multimedia elements. However, due to the lack experience as online learners many course developers are struggling to design effective online courses (McAlpine, Koppi, McLean, & Pearson, 2016). From our findings, the course design process is sometimes ignored, and course developers tend to proceed directly to developing the course materials after they conducted need analysis/feasibility study. Indeed, the two phases of course design and course development are distinct, and it is therefore important to allow sufficient time for each phase. A lack of alignment between the course objectives, content and assessments also will lead to a non-optimal learning experience for students. Without appropriate course design, the online curriculum may lack coherence and flow, making it difficult for learners to understand and absorb the material.

Quayson & Zirkle (2022) suggested several key components to consider in designing an online course; (1) course overview that includes the description and rationale of the course, (2) essential elements which Include course expectations, supportive services, instructor assistance, and tools for online learning (Quayson & Zirkle, 2022). These design principles are expected to significantly impact learning engagement by enhancing motivation, promoting active learning, fostering community, offering flexibility, and providing continuous feedback. Writing learning objectives is also very important to get to the course development stage. In his study, Lewis (2021) suggested that the term "outcomes" should be used to describe what students will learn by the end of an academic program. He also asserted that "objectives" should be used to describe what students will accomplish by the end of the course.

Self-paced learning allows students to control the speed and timing of their education (Success, 2023). The digital content in MOOCs supports this by being accessible at any time and from anywhere, allowing for pedagogical innovation, alignment with learning objectives, knowledge transfer and ensuring adaptability (Marques, Mateus, & Araújo, 2024). However, the development of digital materials for MOOCs is not without its challenges. Engaging learners and increasing learner interaction can be difficult, especially the massive scale of MOOCs (rohini, 2021). Moreover, traditional teaching methods may not translate well to the online format, thus creating informative and engaging content can be a challenge (rohini, 2021). Designing and developing digital material in MOOCs can be time-consuming, and there may be resource and technical constraints (Liu,, Zha, & He, 2019). Thus, to ensure compatibility with assistive technology and provide customisable format options, standards are required to promote inclusivity and enable equitable access to educational resources. A lack of instructional design and development standards, as well as platform standards, can pose challenges (Liu,, Zha, & He, 2019). These challenges may lead the further challenges related to accreditation and recognition of MOOCs for academic credit.

Unlike traditional courses where assessments play a significant factor in determining whether a learner passes or fails, MOOCs may have less rigorous assessment criteria. Moreover, in self-paced learning settings, learners define their success by their own criteria and choose to participate on their own time, often without

external rewards (Shirk, 2020). With a large number of participants, MOOC platforms also often have limited assessment methods, making it difficult to accurately measure learners' comprehension and balancing scalability with meaningful interaction is a constant struggle. Therefore, designing effective assessments for self-paced learning requires addressing these challenges while maintaining quality, scalability, and learner engagement (Shirk, 2020).

The text format is the most basic content format, serving as a clear indication of the importance of the written word in conveying detailed information and complex concepts. Nevertheless, the narrative also demonstrates that the utilization of textual content in isolation can result in a sense of boredom. The visual format of the text can enhance its visual interest by utilizing images, diagrams and infographics to convey information. These elements can facilitate the comprehension of concepts and enhance learner engagement, particularly for those who learn visually. Additionally, audio formats may be employed to reiterate the benefits of podcasts or audio lectures. These resources have been developed with the objective of catering to the needs of audio style learners, while also offering the flexibility to learn anywhere. Finally, multimedia formats combine text, visuals, audio and interactivity. It caters to a diverse range of learning styles, enhances engagement, and is frequently regarded as the most efficacious format for MOOCs. How student engagement with videos and forums in MOOCs can impact their overall achievement, shedding light on the significance of assessment quality in determining the effectiveness of these online learning platforms. (Bonafini, Chae, Park, & Jablokow, 2017)

MOOCs allow learners to progress through the course material at their own pace. Learners can complete modules without being tied to a fixed schedule, this also helps learners to develop self-regulatory skills which are essential for lifelong learning. Therefore, learners need feedback to help them understand their strengths and weaknesses, so they can adjust their learning strategies accordingly. Assessment provides students with regular feedback, and MOOCs typically include various assessment tools, such as exercises, quizzes, tests, as well as projects. Additionally, discussion forums also being crucial in keeping the learners accountable and creating a sense of community.

The preparation of assessment tools in MOOCs requires careful consideration, including the course objectives, the course content, and the capabilities of the LMS. The choice between developing assessment tools independently or utilizing pre-existing, specialized applications, whether free or fee-based, can significantly impact the effectiveness of the assessments and the overall learning experience in MOOCs.

Course developers often prefer to use existing tools in the LMS instead of using fee-based assessment applications. This is possible because the tools are fully integrated with the LMS, allowing for seamless data transfer and easier course and assessment management (Markovic, 2020). Using the same system for all aspects of a course (content delivery, interaction, assessment, etc.) provides a consistent experience for both instructors and students (Singh, 2024).

The discussion forums enable learners to engage by sharing, exchanging, and confronting different ideas related to the course content. Such activities can be employed as a foundation for conducting learning analyses, encompassing the comprehension of interaction patterns, the identification of recurrent inquiries or challenges, and the evaluation of discussion quality (Rivera, Frenay, & Swaen, 2024). Social media may be beneficial in fostering online learning communities in MOOCs. However, the effectiveness of social media in MOOCs can vary greatly depending on the course, the students, and the specific social media platform used (Rivera, Frenay, & Swaen, 2024). Many MOOCs also included video lectures as a primary method of content delivery. Interactions with these videos (such as pausing, rewinding, or replaying sections) can be

tracked and analyzed to understand how learners are engaging with the material (Rivera, Frenay, & Swaen, 2024).

CONCLUSION

Massive Open Online Course (MOOC) presents distinctive challenges due to the large participants and diverse learning styles. Therefore, lecturers must adapt their pedagogical approach to digital education principles to effectively engage the audience. While self-paced learning empowers students, creating digital materials at the massive scale of MOOCs remains challenging. The process is further complicated by the time-consuming nature of the design process, resource constraints and the lack of instructional design standards. In conclusion, the efficacy of online learning platforms is contingent upon the quality of the assessments they employ.

It is beneficial to provide instructors with opportunities to gain insight into the most recent developments in online instructional design and the most effective practices for MOOCs, even for those who are already experienced lecturers. Conducting surveys and polls at various points throughout the course allows for the gathering of feedback regarding the clarity of the content, the perceived workload, and the overall satisfaction with the course. It is recommended that open-ended questions be encouraged to gain insight into the challenges students are facing and their recommendations for improvement. The analysis of this feedback should identify recurring themes, which can then inform data-driven decisions about potential course adjustments.

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