

MOOCs in language materials development course: Internationalizing the EFL curriculum and developing students' global competences

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Article Info

Abstract

Article History:

Received: May 25, 2025

Revised: November 22, 2025

Accepted: November 22, 2025

DOI:

10.20885/jee.v11i2.40605

In the era of globalized education, integrating international perspectives into higher education curricula has become extremely important to equip students with the skills, knowledge, and cultural competencies required in a globally connected world. This study explores the strategic development and implementation of Massive Open Online Courses (MOOC) as a tool to internationalize the curriculum in Language Materials Development classrooms. Drawing on interdisciplinary frameworks from curriculum studies, educational technology, and applied linguistics, the study investigates how MOOCs can serve as content delivery platforms and as pedagogical spaces that foster intercultural competence, digital literacy, and learner autonomy. The research employs a qualitative case study approach, examining the design process, instructional integration, and learner engagement of MOOCs. Findings reveal that MOOCs, when thoughtfully contextualized, promote collaborative learning, expose students to diverse linguistic and cultural resources, and support the development of globally relevant language materials. However, access, localization, and instructional design challenges also emerge, highlighting the need for adaptive strategies in MOOC implementation. The paper concludes by offering practical guidelines for integrating MOOCs into English language education curricula and underscores their potential to transform local classrooms into globally networked learning environments.

Keywords: *Curriculum internationalization; digital pedagogy; intercultural competence; language materials development; massive open online courses.*

INTRODUCTION

In the era of rapid globalization with the rise of complex global challenges and interconnectivity, higher education institutions are under growing pressure to prepare graduates who are both academically competent and globally aware, culturally sensitive, and socially responsible. There is a growing emphasis on necessitating global competence as part of core educational outcomes, which have great relevance for preparing individuals to understand global issues, recognize and appreciate cultural diversities, engage in open, appropriate, and effective interactions across cultures, and to take action towards collective well-being and sustainable development ([OECD, 2018](#)). As nations endeavour to position themselves within an increasingly knowledge-driven global economy, universities are reconceiving the design and delivery of their curricula through the lens of internationalization, specifically in disciplines such as English as a Foreign Language (EFL), which are intrinsically global in scope.

The term curriculum internationalization, within this setting, refers to a systematic attempt to incorporate international, intercultural, and global elements into a curriculum's content and teaching process ([Leask, 2015](#)). This is not simply adding international aspects, but it also integrates a global outlook to achieve objectives, methods, evaluation, and the institutional cultures ([Leask, 2015](#); [Knight, 2004](#)). In EFL classrooms, internationalization can offer students more than simply the language proficiency level; it can nurture their global outlook, improve critical thinking, and build intercultural communication skills, which are crucial tools for teaching and learning in multilingual and multicultural classrooms ([Rose et al., 2021](#)). The practice of curriculum internationalization holds a lot of promise, but implementation can be challenging due to policy integration, teacher readiness, content relevance, and the application of technology ([Rizvi & Lingard, 2010](#)).

MOOCs are typically structured as online courses aimed at large-scale participation and open access via the web, with free and (sometimes) fee-for-service registration to multimedia content such as videos, quizzes, interactive assignments, and interactive forums for community building ([Hollands & Tirthali, 2014](#); [Rolfe, 2015](#); [Stuchlikova & Kosa, 2013](#)). In higher education, MOOCs have provided students with opportunities to access global knowledge, appreciate diversity in perspectives, and build digital literacies vital for academic and professional success in the 21st century ([Deng & Benckendorff, 2021](#)). Thus, MOOCs are in accordance with the process of internationalization of the higher education curriculum.

The use of MOOCs in an EFL classroom combines technological and pedagogical innovations. Pedagogically, MOOCs can provide students with authentic materials; they expose them to various English varieties and cultural discourses; they encourage self-directedness and collaborative learning. From a curriculum perspective, MOOCs could provide access to international content, global networks, and cross-institutional collaborations, measures of internationalized learning environments. As a forum, MOOCs can encourage learner autonomy, intercultural competence, and global awareness, supporting curriculum internationalization and development goals ([Jiang & Peng, 2025](#)).

Despite their potential, the integration of MOOCs in EFL classrooms faces contextual challenges, especially in the Global South, like Indonesia and Malaysia. One of the real-life contexts is that the creators of MOOCs are mostly from Western nations, thus reflecting knowledge, cultural assumptions, pedagogical practices, and linguistic models that may not align with local realities, i.e., non-Western contexts like Indonesia ([Adam, 2019](#)). Moreover, the digital gap, inadequate infrastructure, language differences, and lack of alignment with the needs of the curriculum also impede proactive engagement. Therefore, educational goals, local student requirements, and institutional abilities need to be contextualized or adapted. Under such conditions, the contribution of MOOCs in developing students' global competence becomes more tangible ([Bond et al., 2021](#)).

In addition, MOOCs are an innovative asset in the context of attaining Sustainable Development Goal 4 (SDG 4), which aims at achieving inclusive and equitable quality education and lifelong learning for all. According to [Islam et al. \(2019\)](#), MOOCs (massive open online courses) utilize online teaching platforms to extend educational opportunities to geographic, economic, and social contexts that were previously inaccessible. MOOCs in English as a Foreign Language Teaching (EFL) exemplify perspectives on globalization in higher education and address inclusion, affordability, and quality of education related to Sustainable Development Goal 4. By offering abundant up-to-date information, MOOCs greatly enhance the acquisition of global competencies. As [Stracke and Trisolini \(2021\)](#) pointed out, the electronic materials offered in MOOCs can foster an actively engaging, visually interactive, and skill-focused setting that supports sustainable, equitable global development.

This research seeks to investigate the internationalization of the EFL curriculum via MOOCs in the context of the Language Materials Development (LMD) course. Furthermore, this study seeks to explore how the design and execution of instruction based on MOOCs can solve the three fundamental issues related to the incorporation of MOOCs into EFL education: curriculum localization strategies for the internationalization of EFL curricula through MOOCs, the integration of global competence with MOOC-enabled learning, and guidelines for the application of MOOCs in the EFL curriculum in Indonesia.

Based on the global competence framework of the [OECD \(2018\)](#), [Leask's \(2015\)](#) theory of curriculum internationalization, and the idea of critical digital pedagogy by ([Lamy & Hampel, 2007](#)), this research uses a qualitative case study to critically explore the interactions of students-students and students-lecturers through MOOCs in Language Materials Development (LMD) courses within the context of EFL. This research looks closely at how MOOC-based instructional modules are designed, the teaching strategies used to integrate them into classroom learning, and how MOOCs support students in developing global competencies, especially in areas such as intercultural understanding, critical thinking about global issues, and effective communication in English.

This research was conducted in the English Education Study Program, Faculty of Languages and Arts, Universitas Negeri Semarang (UNNES), Indonesia and the Education with TESL Program, Faculty of Education and Sports Science, Universiti Malaysia Sabah (UMS), Malaysia as a case study of implementation, contributing to the evolving theories of internationalization and technology integration within the EFL curriculum in higher education settings. The study reveals the processes and challenges of MOOCs implementation, not as single learning sources, but as components in a blended model of teaching and learning processes that complements face-to-face instruction which meets the internationalization objectives of the institution, using a qualitative case study design ([Onah et al., 2022](#); [Yin, 2014](#)). It also interrogates accepted notions of global learning by demonstrating that nurturing global competences can occur in the absence of studying abroad and instead by intentionally designing classroom instruction materials that are inclusive and imaginative ([Cseh et al., 2025](#)).

The intersection of the curriculum internationalization, EFL, and MOOCs presents a strategic pathway for developing globally competent graduates. It calls on educators, curriculum designers, and policymakers to reimagine the EFL classroom as a space for learning English and engaging with the world. By integrating globally informed and locally grounded MOOCs, institutions can foster students' readiness to navigate and contribute to an increasingly complex, multicultural, and multilingual world. The EFL classrooms, thus, become dynamic sites of global learning—one where language development and global citizenship converge. To clarify the focus and direction of this study, the present research is guided by the following questions:

- 1) How are MOOC-based instructional modules designed and localized to support the internationalization of the EFL curriculum in the Language Materials Development (LMD) course?
- 2) How does the integration of MOOCs facilitate students' development of global competence, including intercultural understanding, critical global awareness, and communication skills in English?
- 3) Why do specific pedagogical and contextual challenges arise in the implementation of MOOCs within EFL classrooms, and what implications do these challenges have for future curriculum development?

These questions frame the study's contribution to advancing theoretical and practical understandings of curriculum internationalization, technology-enhanced language learning, and global competence development in higher education both.

RESEARCH METHOD

Research Design

This research employs a qualitative case study design ([Cohen et al., 2017](#); [Yin, 2014](#)) to investigate how the curriculum internationalization develops global competences of students by integrating MOOCs in the LMD classrooms. A case study design is the most appropriate for this study because it investigates the nature of the phenomenon within the context of real life when the boundaries between the phenomenon and context are not clearly evident ([Stake, 1995](#); [Yin, 2014](#)).

Research Setting and Participants

The research was conducted at two universities: the English Education Study Program, Faculty of Languages and Arts, Universitas Negeri Semarang (UNNES), Indonesia, and the Education with TESL Program, Faculty of Education and Sports Science, Universiti Malaysia Sabah (UMS), Malaysia. Both study programs integrate MOOCs into several courses, including the Language Materials Development (LMD) course. The research participants comprised 90 undergraduate students from UNNES and 62 students from UMS enrolled in the LMD course, along with one course lecturer and two teams of MOOC developers associated with the course content. The course instructor and the MOOC developers collaboratively designed and executed the MOOC-based instructional materials. Those participants were selected through a purposive sampling procedure designed to achieve the detail provided by the study respondents who were around the internationalization of EFL curriculum and the integration of MOOCs into classroom instruction ([Creswell & Poth, 2018](#)).

Data Collection Techniques

The research integrated qualitative methods through the use of semi-structured interviews, classroom observations within MOOCs, and document reviews. This methodological triangulation brought a rich data set, which facilitated in-depth analysis and enhanced the validity of the findings. The participants from both universities (teachers and students) were interviewed to gather their perceptions of MOOCs and their impact on global competence. The focus of the student interviews was to assess the level of participation by the students in the learning activities and their exposure to different cultures and viewpoints in the forum. The interviews with the teachers focused on the teaching goals and techniques used and the difficulties experienced in the incorporation of MOOCs into LMD courses.

The classroom observation was conducted six times during the integration of MOOC into LMD courses. The notes documented participants' activities, as well as the global issues being taught, and thus contributed to understanding how the internationalization of curriculum is enacted pedagogically ([Merriam & Tisdell, 2015](#)). The document analysis included syllabi, instructional materials, and student assignments from the MOOCs platform. The documents were examined to determine the degree of alignment with global learning outcomes, the level of internationalization of the courses, and the extent to which students demonstrated the use of intercultural understanding in their projects.

Data Analysis

The data was analyzed using thematic analysis through the six-phase model by [Braun & Clarke \(2006\)](#). All interview recordings were transcribed and comprehensively read a number of times to become familiar with the contexts and nuances. Initial codes were created inductively and then grouped into meaningful categories. Themes were later reviewed, refined, and defined pertaining to the research focus on global competence, MOOCs integration, and the EFL curriculum internationalization ([Braun & Clarke, 2006](#)). This study used the [OECD \(2018\)](#) Global Competence Framework as a reference in developing the themes which outlines global competences within four dimensions: (1) analyzing global and intercultural issues, (2) understanding and valuing diverse viewpoints, (3) respectful open communication, and (4) constructive action towards sustainability. The Leask's framework (2015) for internationalizing the curriculum by integrating international and intercultural dimensions into all aspects of learning outcomes, content, assessment, and pedagogy was also used as the underlying basis of analyzing the data in this study.

Trustworthiness and Ethical Considerations

The trustworthiness of this study was established by triangulating data sources, member checking, and peer debriefing. Cross-validation of the interviews, observations, and documentary data was undertaken to assure output reliability ([Lincoln & Guba, 1985](#)). Both the transcripts and emerging interpretations were shared with the respondents to enhance credibility. Peer debriefings were used to explain to fellow researchers the possible weaknesses and share the efforts to enhance analytical rigor.

Ethical approval was given by the UNNES research ethics committee. After being given informed consent, the research participants were assured that the information they shared would be treated as confidential. They were also given the right to withdraw at any time. The use of pseudonyms has been made in reporting the data to protect the identities of the participants.

FINDINGS AND DISCUSSION

This section presents the major findings of the study, organized according to the three research questions. Each thematic subsection directly answers one or more research questions by drawing on empirical data, relevant literature, and theoretical frameworks. The themes addressing (RQ1) examine how MOOC-based instructional modules are designed and localized to support internationalization of the EFL curriculum in LMD course. (RQ2) How the integration of MOOCs facilitate students' development of global competence, including intercultural understanding, critical awareness, and communication skills in English. (RQ3) pedagogical and contextual challenges which arise in the MOOC implementation within EFL classrooms.

Research Question 1. How MOOC-based instructional modules are designed and localized to support internationalization of the EFL curriculum in LMD course?

The following sections outline the ways in which the MOOCs were selected, localized, and integrated into the LMD course to support internationalized learning. The study examines both the selection of specific MOOC materials and the strategies instructors used to make them relevant to students' local learning context. In doing so, it highlights how MOOCs functioned as both supplementary resources and vehicles for fostering global competence, learner autonomy, and interactive engagement within the curriculum.

a. *Localized Utilization of MOOC Features in LMD Instructional Design*

Classroom observations and feedback forms show that the MOOCs functioned mainly as localized supplementary materials that supported the core content of the LMD course. Instead of using the MOOCs as a complete standalone course, the instructors selected specific parts of the materials that were most relevant for the students. They focused on resources

related to grammar, vocabulary, and discourse, and then aligned these materials with the intended learning outcomes of the LMD syllabus. This approach reflects a form of contextual localization, where instructors filtered and adapted only the MOOC segments that fit the needs of the course and the learning context. Through this process, the MOOCs became integrated into regular classroom activities in a way that felt purposeful and meaningful for the students.

This outcome goes hand in hand with earlier studies that suggest MOOCs can be accessed beyond the traditional boundaries of a classroom ([Beaven, 2013](#); [Sokolik, 2014](#)). Students interacted with many aspects of the MOOCs, especially the interactive ones like quizzes and discussion forums, where students could interact with each other and the instructors. These interactive components were the most utilized features of the MOOCs, along with videos and other multimedia resources. According to [Dabbagh et al. \(2019\)](#) the students valued the multimedia and believed the resources contributed positively to their language learning.

Excerpt 4:

"I prefer learning this course [LMD] using some online materials for my learning, such as YouTube and other online platforms" [Gary, interview]

The incorporation of online multimedia indicates that the students seek more engaging and resource-intensive learning experiences, similar to those found in the LMD courses, where learners participated in language activities that closely resemble real-world contexts. This underscores the desire for interactive, experience-based resources that foster active learning ([Godwin-Jones, 2014](#)).

b. Linking MOOC Content with Global Competence and Internationalized Curriculum Outcomes

The integration of MOOC content in the LMD course can be understood through the [OECD \(2018\)](#), which identifies four dimensions of global competence: exploring local, global, and cultural issues; valuing different perspectives; interacting appropriately across cultures; and taking action that supports collective well-being and sustainability. These dimensions informed how instructors selected and adapted MOOC materials for the course. In practice, they connected global topics, multicultural discourse examples, and authentic international case studies from the MOOCs with the local experiences and learning needs of LMD students. This approach helped students interpret global content in a way that remained meaningful within their own cultural and educational context ([Beelen & Jones, 2015](#)).

The adaptation process also reflected [Leask's \(2015\)](#) model of Curriculum Internationalization, which creates a blend of international and intercultural dimensions within the syllabus meant for enhancing academic and intercultural outcomes. Leask maintains that the dimension of internationalization should not be taken as a mobility plan or a bolt-on extra element; instead, it should be regarded as infused within every program through defined outcomes, content, teaching, and assessment ([Leask, 2015](#)). This model was used in this study to implement the MOOCs in LMD courses because they are flexible, thus facilitating the integration of international content and intercultural participations. It opened participation beyond mobility programs to such an extent that it deepened curriculum internationalization with rich content and collaborative activities for 'all' students ([Beelen & Jones, 2015](#)). This study places its major emphasis on the improvement of global learning opportunities and the fostering of equitable engagement in international contexts.

c. MOOCs as Catalysts for Curriculum Innovation Through Localized and Internationalized Learning Design

Massive Open Online Courses (MOOCs) are one of the powerful aids in internationalizing the curriculum and injecting innovation into the teaching methodologies ([Ossiannilsson et al., 2016](#)). Previous studies highlight their potential to transform instructional practices by introducing more flexible, self-paced learning environments that encourage global

engagement and support diverse learner needs. In this study, the integration of MOOCs into the LMD course supported these outcomes by offering students extended opportunities to build skills, explore global issues, and develop international problem-solving perspectives beyond what was possible through conventional classroom instruction ([Calvo et al., 2020](#)). Research has also shown that combining MOOCs with face-to-face learning can lead to improved student outcomes and positive experiences for both learners and instructors ([Israel, 2015](#); [Oh et al., 2023](#))

MOOCs also provide an excellent opportunity for the reformation of the English program according to the students' diversified requirements ([Gómez et al., 2022](#); [Ma, 2014](#)). Some institutions have taken the initiative to introduce mobility and credit transfer in blended MOOCs classroom interaction assessments for degree completion ([Bralić & Divjak, 2018](#); [Joseph & Nath, 2013](#)). Besides, we believe, it is through MOOCs that educators can learn new skills and competences in terms of the technical and pedagogical aspects required by contemporary education ([de Carvalho et al., 2020](#)). It is where the approach to internationalization is increasingly part of the strategic priorities of many authorities; thus, MOOCs are great pathways to widening access to education while fostering a global learning experience ([Martis et al., 2017](#)).

Compared with traditional lecture-based instruction, the inclusion of MOOC materials provides students with greater autonomy and more individualized learning pathways. This study critically discusses how the MOOCs redefine open online learning by promoting learning at one's own pace and without any geographical boundaries, therefore removing the barriers of access and equity in higher education ([Lambert, 2020](#); [Lin et al., 2023](#); [Malik & Hooda, 2023](#)). According to [Stich & Reeves \(2017\)](#) flexibility in MOOCs can rise to a level where learners can decide on the order and speed of content consumption, which fundamentally differentiates one framework of distance education from others. Hence, in this study, we consider it a driver that urges contemporary, highly informed societies to embrace the novel.

Within the EFL context, the use of MOOCs contributes not only to linguistic development but also to the broader goals of curriculum internationalization. Their interdisciplinary nature supports the growth of intercultural awareness, learner autonomy, digital literacy, collaborative skills, and global networking opportunities ([Mackness et al., 2013](#)). These outcomes align closely with the aims of internationalized curricula, reinforcing the role of MOOCs as meaningful tools for preparing students to participate in global academic and professional communities.

Research Question 2. How the integration of MOOCs facilitate students' development of global competence, including intercultural understanding, critical awareness, and communication skills in English?

To address this question, the analysis examines how MOOCs in the LMD course support students' global competence, including intercultural understanding, critical awareness, and communication skills. The following sections discuss intercultural exposure, learner autonomy, collaborative communication, and engagement patterns that influence these outcomes.

a. Intercultural Understanding Enhanced Through MOOC-Based Learning

Integrating MOOCs into the EFL curriculum is associated with increasing students' intercultural understanding. With the inclusion of authentic videos, quizziz, articles, and discussions with peers from diverse cultures, students with access to the MOOCs appreciate the relativistic applications of English around the globe ([Chiu & Hew, 2018](#); [Luo et al., 2022](#)). Based on our observation, the MOOC activities provided students with wider exposure to diverse English varieties compared to the materials typically used in the course, which often place greater emphasis on idealized native-speaker models rather than presenting English as

an academic subject. In other words, the MOOCs position English as a dynamic lingua franca that is responsive to varied cultural and contextual realities. Several respondents indicated that these experiences have altered their preconceived notions and attitudes.

Excerpt 1:

"Participating in the MOOC program helped me understand how English has different meanings in different cultures. It expanded my understanding and made me learn to appreciate other people's views." [Brian, interview].

There is research literature backing these personal insights; [Rajprasit \(2022\)](#) designed and evaluated a Thai university's MOOCs 'English as a Global Language', where the focus was to enhance students' perceptions and awareness of Global Englishes. The findings indicated that the students showed greater awareness and sensitivity to the socio-linguistic realities of English, thereby improving understanding and fostering deeper intercultural empathy. In the same way, [Rai et al. \(2023\)](#) analyzed language teaching through cultures incorporated in MOOCs, concluding that such courses enhance soft skills needed for international professional communication.

b. Development of Critical Awareness and Digital Self-Efficacy Through Autonomous MOOC Engagement

The integration of self-paced MOOCs into the course structure created learning conditions that supported the gradual development of learner autonomy. This model allows the learners to take charge of their educational journeys by formulating personal objectives and efficiently organizing their time towards meeting those objectives. This autonomy was further supported by the development of digital literacy skills, as students navigated various online platforms, engaged with multimedia content, and participated in virtual discussions ([Yelubay et al., 2022](#))

Excerpt 2:

"Completing the MOOC modules required different online tools, and I learned how to manage my time to use them effectively. That increased my confidence in using technologies for learning." [Shofia, interview]

Students' experiences expressed in the excerpt above corroborate the work of [Martínez-et al. \(2022\)](#) showing that MOOCs play a key role in the development of digital competences aimed at preparing prospective teachers to use technology in their teaching. Besides, the changes in the COVID-19 educational landscape triggered by the pandemic were also studied by [Díaz-Noguera et al. \(2022\)](#) who emphasized the role that autonomy, motivation, pedagogy, and digital tools had on students' online learning experiences, which affect the needs for online courses like MOOCs as one of the alternative learning tools in the educational settings.

According to [Nugroho and Atmojo \(2020\)](#), digital platforms, like MOOCs, establish independent and adaptable learning environments that transcend traditional classrooms, allowing students to access learning materials at any time and from any location. Likewise, [Hidayati \(2016\)](#) emphasizes the importance of ICT integration in Indonesian EFL contexts, pointing out that it not only improves the efficacy of instruction but also makes it easier to use varied and authentic learning resources, which is in line with MOOCs' interactive and student-centered design. All of these results add up to the growing awareness of MOOCs as helpful resources in modern-day EFL that can create learner independence and global competencies.

In addition, we believe applying MOOCs in the syllabus not only raises student ICT competence but also promotes self-directed learning, which is very important in 21st-century skills. By getting admitted to MOOCs, students are gaining the ability to take part in global knowledge networks and work in a collaborative digital environment ([Rai et al., 2023](#)). Thus, developments are at the core of the attainment of global competence, defined as the

knowledge and appreciation of cultural diversity and effective cross-cultural communication. These skills can easily be attained from diverse cultural content. The agile content structure and active form of MOOCs make them a big factor in pushing such cross-cultural awareness, international courses, digital skills, and allowing the learners to get involved with many resources ([Jiaxin et al., 2024](#)). Also, the good thoughts of people on web-based English learning show the effectiveness of online sites, like MOOCs, in building language skills ([Butarbutar et al., 2023](#)).

c. Strengthening Communication Skills Through Collaborative and Cross-Cultural MOOC Interactions

MOOCs accommodate collaborative learning and global networking. The students discussed online with those from different cultural backgrounds and worked on assignments collectively, thus creating a sense of global community and improving communication.

Excerpt 3:

"The interactions with the students from different cultural backgrounds, through the discussions of MOOC, widened my thinking and improved my communication skills." [Thomas, interview]

The excerpt above supports the results of [Hackett et al. \(2023\)](#), who found that the use of COIL (Collaborative International Online Learning) can be more successful in nurturing intercultural competences through the mode of virtual exchanges. A strong case can be made for the proposition that collaborative experiences are productive in developing global competence, particularly in such aspects as open and appropriate cultural interactions ([OECD, 2018](#)). Recent changes in the methodology of teaching the English language have occurred with the emergence of technological awareness as essential pedagogical skills of the 21st century; therefore, MOOCs would be under the light of secondary learning resources and transformational components in the current EFL practices oriented to globalized and technologized teaching and students' competencies.

d. Patterns of MOOC Engagement That Support or Hinder the Development of Global Competence

In view of the changes in the post-pandemic educational landscape, effective strategies need to be developed to support and enhance student engagement ([Irwanto et al., 2022](#); [Khaerani et al., 2023](#)). What we have here in this paper (i.e., the analytics of the platform of the MOOCs) is varied usage patterns by the students. Those who consistently dedicated more time to engaging with the platform demonstrated higher task and quiz completion rates, suggesting a positive correlation between sustained platform interaction and academic performance ([Wang et al., 2022](#)). This relation indicates that regular engagement with the materials of MOOCs for some appropriate time is essential to achieve learning gains from MOOCs ([Gašević et al., 2014](#); [Jordan, 2014](#)). These results are consistent with the research that emphasized engagement in complex learning contexts as relevant to realizing educational benefits ([Garrison, 2016](#)). However, the study also found that a few students were unlikely to maintain a consistent pattern of engagement. Few of them showed irregular interaction patterns and activity spikes, especially around assignment hand-ins. Their participation in the MOOCs at this time may have been used reactively to answer their needs. As a transient rather than ongoing learning, it will likely impede overall language development ([Zhang, et al., 2022](#)).

Research Question 3. Why do specific pedagogical and contextual challenges arise in the implementation of MOOCs within EFL classrooms, and what implications do these challenges have for future curriculum development?

This section examines the pedagogical, cultural, and technological challenges in implementing MOOCs in EFL classrooms, as well as their implications for future curriculum development and culturally responsive integration.

a. Pedagogical and Cultural Challenges in Localizing MOOC Content for Diverse EFL Learners

Although MOOCs offer rich, globally oriented resources, the findings show that instructors and students encountered substantial challenges in localizing MOOC content to fit the linguistic, cultural, and pedagogical realities of Indonesian EFL learners. Several participants found certain materials culturally less relevant or linguistically challenging, which hindered engagement and comprehension. During the implementation of our MOOCs program in LMD courses, some participants commented on the importance of the course materials. Certain topics, such as those presented in modules on the English curriculum within the 2013 Curriculum and the Emancipated Curriculum, are contextually grounded in the Indonesian education system and may be unfamiliar to learners from other universities or countries, and vice versa.

For example, Brian emphasized that while some modules addressed broader issues such as curriculum internationalization, their relevance was uneven across contexts, depending on learners' familiarity with the themes.

Excerpt 5:

"Yet other topics in the program address overarching issues such as curriculum internationalization, which makes the content relevant for many learners". [Brian, interview]

The excerpt reflects issues highlighted by other researchers regarding the Western bias that characterizes many MOOCs, which may not be relevant to the culture of learners from other parts of the world ([Altbach, 2014](#)). [Rajprasisit \(2022\)](#) pointed out the necessity of making MOOC materials more contextualized for local learners.

Excerpt 6:

"Some MOOC materials were not relatable to our students' cultural experiences, making it difficult for them to connect with the content." [Mrs. Jeanne, interview]

From the interview excerpt above, we argue that addressing these challenges requires thoughtful adaptation of the MOOCs content to ensure cultural relevance and inclusivity, thereby enhancing the effectiveness of the MOOCs in developing students' global competences.

Other concerns we found were gaps in the scope of student participation and the use of MOOCs because of Internet-related barriers and different levels of digital skills. Some of these students faced lower internet bandwidth and other software incompatibility problems, which made it even more difficult to obtain educational materials and participate in MOOCs ([Kirkwood & Price, 2014](#)). Digital literacy barriers further shed light on participants' capabilities to perform learning activities in an online environment. Those who were less adept at using the computer experienced greater difficulties with the manual operations, implying that there is a greater need for attention in order to shift students from the virtual setting to the actual one ([Zulkifli et al., 2020](#)).

b. Technological and Digital Literacy Limitations That Constrain Effective MOOC Participation

The challenges identified in the study extend beyond pedagogical concerns and include several technology-related constraints that influenced students' learning experiences. Some participants described intermittent difficulties accessing MOOC materials due to low

bandwidth, limited device capacity, or occasional platform incompatibilities, which at times affected the consistency of their participation. These observations are generally in line with [Kirkwood and Price's \(2014\)](#) view that varying levels of digital access can shape learners' opportunities in online environments, particularly in contexts where infrastructural support continues to develop. Digital literacy also appeared to play a role in how smoothly students navigated the MOOC platforms. Learners with less experience using online learning systems sometimes needed more time to adjust to platform features, manage pacing, or complete certain technical steps. As [Zulkifli et al. \(2020\)](#) note, such disparities in digital competence can significantly affect learners' ability to fully engage with online learning systems. In this study, such variations occasionally resulted in slower progression for a small number of learners, although many were able to adapt with continued use.

These technological and skill-based limitations have direct implications for curriculum internationalization. Without adequate digital infrastructure, institutional support, and student preparation, MOOCs risk reinforcing educational inequities instead of promoting the access and inclusion they promise. The findings support [Bates \(2015\)](#) who argues that universities must proactively invest in digital-literacy training and technical support systems if MOOCs are to function as effective tools for widening participation.

c. Implications for Future Curriculum Development and Culturally Responsive MOOC Integration

Despite the challenges, the data also reveal actionable insights for developing more inclusive and culturally attuned MOOC-integrated curricula. First, the study highlights the importance of embedding culturally diverse and authentic materials within MOOCs to nurture students' intercultural awareness and global perspectives ([Zhu et al., 2020](#)). The findings showed that students benefited most when instructors paired MOOC content with structured discussions, reflective tasks, and guided intercultural dialogues, an approach that aligns with the recommendations of [Yuan and Powell \(2013\)](#). The findings also underscore the need for deliberate content customization. Tailoring MOOC materials to learners' linguistic levels and cultural backgrounds enhances relevance and inclusion ([Guo et al., 2014](#)). When contextualized appropriately, MOOCs can support not only global competence but also the acquisition of foundational skills such as autonomy, digital literacy, and self-regulated learning ([Rahimi & Cheraghi, 2024](#); [Wang, 2014](#); [Zhu, 2024](#)). Students in this study reported heightened confidence in managing learning resources, organizing study schedules, and navigating digital platforms—suggesting that well-implemented MOOC integration strengthens 21st-century competencies.

Moreover, MOOCs facilitated collaborative learning opportunities and global academic networking through peer review, discussion forums, and cross-cultural group work. These interactions mirror the dynamics of internationalized learning environments and contribute to students' communicative and intercultural development ([Liu et al., 2022](#)). However, the study also reveals an urgent need to address the Western-centric pedagogical structures inherent in many MOOC designs. References, examples, idiomatic usage, and communication styles often reflect norms that do not resonate with non-Western learners ([Zhu et al., 2020](#)), reinforcing the significance of culturally responsive MOOC design frameworks ([Bond et al., 2021](#)).

CONCLUSIONS

This research investigates the adoption and use of MOOCs in Language Materials Development (LMD) courses in EFL Classrooms. The main aim is to explore students' interaction with these online resources, particularly their learning difficulties. The results showed that the MOOCs help learners practice and repeat the content introduced in classes. It was explicitly highlighted that the section involving interactive multimedia elements, such as videos and quizzes, which were in line with LMD courses which ultimately helps the students to better speak the language. The MOOCs may hence be able to achieve successful

implementation through the enhancement of self-paced flexibility that goes above and beyond the traditional classroom setting.

This study is valuable as part of the MOOCs' involvement in the development of students' global competences through the curriculum internationalization. However, the study is limited because the qualitative aspect and focus on one institution can make the findings not applicable for generalization. Qualitative case studies are strong in providing deep context but often do not possess wide-ranging empirical resources for drawing general conclusions. Thus, further research based on a mixed-method approach integrating qualitative and quantitative information is needed to make the results more general and comprehensive. The study can only compare and reflect the different contexts, cultures, and curriculum models of education insofar as one additional institution is included, further limiting its scope. The activities of other institutional settings in the region or the country would provide comparative information about the implementation of MOOCs and their effectiveness in developing students' global competence.

This study also records data at one specific moment in time, which creates challenges when determining the enduring impact or sustainability of MOOCs integration. There is a need for longitudinal studies focused on the impact of sustained interaction with MOOCs on students' intercultural understanding, digital literacy skills, and readiness for global citizenship over time. These lines of research will help refine the understanding of how learning technologies can be utilized to foster inclusivity and a global perspective in higher education.

MOOCs have great potential for improving language education in LMD courses. Nevertheless, in the success of this, there remain critical technical, pedagogical, and cultural barriers to be overcome. Easy-to-use site design, support for digital literacy, timely feedback, and culturally relevant content are critical enablers of tracing the maximum benefits of MOOCs in internationalized educational settings. These findings indicate that there is a need for intentional MOOCs design to serve varied student needs and learning strategies where they are absent.

The focus of future research should be on student engagement in MOOC-based contexts and the similar effectiveness of culturally appropriate content in supporting more successful language learning for learners at different levels. The findings have discussed some of the implications for student engagement, challenges, and content relevance that can be used to fuel the discourse of MOOCs in higher education. This shows that there is a need for a ready, step-by-step toolkit approach, which can help MOOCs fit right into language learning, depending on how things are, thus making it easy for places to move towards their international goals and make the students' global learning better. The work, therefore, brings out the need to show what students think, the roadblocks MOOCs face, and the differences in culture for MOOCs to reach their full potential in making online learning interesting.

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