

Exploring the Transformative Potential of Blended Learning with MOOCs: A Case Study in Vietnamese Higher Education Amidst the COVID-19 Pandemic

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Article information	Abstract
Article history:	<i>The significant influence of communication technologies, most evident during the COVID-19 pandemic, has led to a fundamental shift in global education. This study investigates the advantages of incorporating a blended learning approach, particularly by integrating Massive Open Online Courses (MOOCs) into undergraduate programs at a university in Vietnam. The study employs a qualitative methodology, focusing on conducting semi-structured interviews with various stakeholders, including administrators, lecturers, curriculum developers, and students. Through this approach, the study aims to uncover the primary advantages seen by these individuals. The findings highlight numerous crucial benefits associated with blended learning through MOOCs. Stakeholders place significant emphasis on improving professional knowledge and developing 21st-century skills. They aim to promote learner independence, encourage a lifetime commitment to learning, and prepare individuals for future career prospects. These findings provide practical insights into the effectiveness of blended learning using MOOCs and contribute to the broader discussion on modern educational paradigms. Notably, they highlight the alignment of these models with the evolving needs of students and the shifting expectations of the contemporary labor market.</i>
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INTRODUCTION

Blended learning has become an essential instructional approach for educational institutions globally, particularly in developing countries such as Vietnam, where it has been adopted to modernize traditional teaching methods and enhance student engagement and autonomy

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(Kumar, 2021; Le, 2025). In response to the increasing demand for innovative and flexible learning methods, Vietnamese higher education institutions have embraced blended learning to enrich student experiences, particularly in English as a Foreign Language (EFL) education. This approach provides students with greater access to English language resources, helping to address the limited language exposure often encountered within and outside formal English lessons. Through blended learning, institutions in Vietnam have developed instructional models that balance in-person interactions with tailored online learning experiences, which have shown potential for improving language acquisition and student outcomes (Tang & Tien, 2020).

The integration of Massive Open Online Courses (MOOCs) in language education, particularly Language MOOCs (LMOOCs), has further advanced the blended learning model. LMOOCs are specifically designed to facilitate language learning through structured content and interactive activities in an online environment, offering diverse linguistic inputs and practice opportunities beyond the conventional classroom (Chong et al., 2024; Ho & Le, 2024; Nguyen, 2022). Such MOOCs, provided by platforms like Coursera, enable learners to access high-quality language materials and engage in self-directed study, which is especially beneficial for EFL learners in non-English-speaking countries. Given the potential of LMOOCs to improve accessibility and foster independence in language learning, their incorporation within blended learning frameworks has become a powerful tool for developing language proficiency, collaborative skills, and learner autonomy (O'Connor et al., 2023).

In 2019, a Vietnamese higher education institution (HEI) implemented a digital transformation strategy to enhance student learning experiences through a blended learning model, incorporating Coursera as the MOOC provider. This approach was intended to establish a digital learning ecosystem that promotes digital literacy and self-directed learning, with blended courses making up 20% of the curriculum. The selection of Coursera's LMOOCs was based on their extensive resources and structured language instruction, which aligned with the HEI's goal of supporting flexible and accessible educational opportunities for students (Hoi, 2020).

This study examines the benefits of implementing blended learning, including LMOOCs, analyzing how this approach impacts language learning in Vietnamese higher education. By highlighting the strengths of blended learning, particularly in the context of language education, this study contributes to a deeper understanding of how digital and face-to-face instructional methods can be harmonized to enhance language acquisition and essential skill development. Through this analysis, the study aims to provide insights into the ways blended learning, combined with LMOOCs, can support the evolving educational landscape in Vietnam and offer a model for other educational systems seeking to integrate modern learning approaches effectively.

LITERATURE REVIEW

MOOCs and blended learning: Empirical insights and educational impacts

The integration of Massive Open Online Courses (MOOCs) into traditional educational settings has gained global attention, with extensive research examining the benefits and limitations of

MOOCs within blended learning environments. Empirical studies suggest that MOOCs have the potential to raise educational standards by providing high-quality, accessible content from reputable institutions, which can enrich traditional learning experiences (Bralić & Divjak, 2018; Sosa-Díaz & Fernández-Sánchez, 2020; Virani et al., 2023). MOOCs also foster self-directed learning skills as students engage independently with online modules. For instance, a study conducted at Vanderbilt University integrated a Coursera "Machine Learning" MOOC into a graduate-level course, yielding positive outcomes where students reported enhanced engagement and learning autonomy (Yousef & Sumner, 2021).

Similarly, Israel (2015) found that students in blended courses utilizing Coursera MOOCs performed comparably to, and in some cases better than, those in traditional classroom settings in terms of grades, passing rates, and examination scores. This evidence indicates that MOOCs can be effectively incorporated into formal curricula, enhancing both academic performance and student satisfaction. However, the perspectives of various stakeholders, including educators, students, and program developers, on the integration of MOOCs require careful consideration to balance the benefits with potential challenges. Different stakeholders may have unique concerns regarding the possible impacts of MOOCs on institutional roles, learning quality, and competition within the educational sector (Gao et al., 2020).

Language MOOCs in blended learning

Language MOOCs (LMOOCs) represent a specialized application of MOOCs aimed at language acquisition, providing learners with access to structured content, interactive exercises, and opportunities for practice beyond the classroom. Studies on LMOOCs highlight the advantages of integrating online language resources with face-to-face instruction to create a comprehensive language learning environment (Chong et al., 2024; Lou & Ye, 2021; Sallam et al., 2022). LMOOCs support blended learning by combining asynchronous access to language materials with synchronous, in-person engagement, allowing students to learn at their own pace while benefiting from instructor guidance (Appel & Fernández, 2022). Research by Martín-Monje and Borthwick (2021) demonstrated that LMOOCs enhance learners' motivation and engagement through interactive multimedia content, which appeals to diverse learning preferences.

Empirical studies underscore both the strengths and challenges of LMOOCs within blended learning. For example, Bárcena et al. (2014) found that students in LMOOC-supported courses exhibited higher language proficiency gains compared to those in traditional classes, primarily due to the extensive exposure to target language materials available online. However, the self-directed nature of LMOOCs can also lead to uneven learning outcomes, as students with lower motivation or time-management skills may struggle to keep pace with course requirements (Sokolik, 2014). These findings suggest that while LMOOCs offer considerable benefits, they require strong institutional support and appropriate instructional strategies to maximize student success in blended language learning environments.

Multifaceted advantages of blended learning: Empirical evidence

Blended learning has been empirically validated as a practical instructional approach that combines the benefits of face-to-face and online learning, yielding a range of advantages for

students. Research by Müller et al. (2023) emphasized that the online component of blended learning provides students with flexibility, enabling them to interact with course materials at their convenience and reducing the barriers associated with traditional, scheduled classes. This flexibility has been linked to increased academic engagement and satisfaction among students, as they can review materials multiple times and access a wide range of resources online (Jebraeily et al., 2020).

Additionally, blended learning has been shown to strengthen student-lecturer relationships, encouraging increased student engagement in learner-centered environments. Sabre et al. (2022) found that students in blended courses actively participated in collaborative tasks, demonstrating improved interaction and peer support. Cooperative learning is particularly prominent in blended environments, where online forums, group projects, and peer discussions facilitate engagement and teamwork, enhancing social learning experiences (Lu, 2021).

Blended learning has also been found to develop the 4C skills (Creativity, Critical Thinking, Collaboration, and Communication), which are essential in modern educational contexts. Lu's (2021) study demonstrated that students perceived blended learning as significantly enhancing their critical thinking abilities, as it allowed them to analyze and synthesize information independently before engaging in classroom discussions. Roqobih et al. (2019) similarly found that the integration of online and face-to-face components positively impacted students' creative capacities as they engaged with diverse content and applied new concepts in varied contexts. Erbil (2020) further reported that blended learning improved communication skills as students practiced articulating ideas in both virtual and in-person settings.

Supporting these findings, Purwasih et al. (2021) highlighted that blended learning has a notable impact on fostering the 4C skills, with critical thinking showing the most improvement, followed by creativity and communication, while collaboration exhibited the least progress. These findings collectively underscore the educational benefits of blended learning, particularly in developing skills crucial for 21st-century learners, thereby supporting its role as an effective instructional approach.

The primary objective of this study is to explore the advantages of implementing blended learning in Vietnamese higher education, specifically focusing on its impact on students, educators, and institutional practices. To fulfill this objective, this study addresses the following research question:

What are the main benefits experienced by students and educators in a blended learning environment that incorporates MOOCs and LMOOCs?

Through this question, this study aims to deepen the understanding of blended learning's potential as a transformative educational model, with particular emphasis on its role in language acquisition and skill development within the framework of Vietnamese higher education.

METHODOLOGY

Research design

This study adopted a qualitative research design, specifically using semi-structured interviews to investigate the complexities of implementing blended learning in a Vietnamese higher education context. Qualitative approaches are well-suited for exploring complex social phenomena, such as blended learning implementation, as they allow researchers to capture the nuanced experiences and perceptions of participants in their natural contexts (Creswell & Poth, 2016; Merriam & Tisdell, 2015). By employing a flexible but systematic approach, the semi-structured format facilitated consistent data collection across various participant roles while enabling the exploration of individual experiences in depth.

Activity Theory, the guiding theoretical framework, supported this design by providing a lens to examine how students, educators, and institutional structures interact within the blended learning environment. Activity Theory's focus on understanding contradictions and tensions within activity systems makes it particularly effective for analyzing both the technical and human aspects of educational contexts (Engeström, 1987; Yamagata-Lynch, 2010). This framework's emphasis on the interplay between individuals, tools, and their sociocultural environments aligns with the qualitative approach, as it prioritizes a holistic understanding of the interplay between these elements in shaping learning experiences. Additionally, the qualitative methodology aligns with previous studies on blended learning that have successfully employed semi-structured interviews to explore contextualized insights into participant experiences and institutional challenges (Garrison & Vaughan, 2008). This approach provided the depth and flexibility needed to uncover underlying issues and identify strategies for effective implementation in the Vietnamese higher education context.

Participants

The study engaged a diverse participant group to capture a comprehensive range of perspectives on the blended learning experience. The participants included ten administrators, eleven lecturers, and three curriculum developers, selected to provide insight into the educational and administrative dimensions of blended learning implementation. Additionally, six students who had previously participated in an online survey were included to represent the learner perspective. A purposive sampling approach was employed to ensure that each participant possessed substantial experience and familiarity with the blended learning framework, thereby enriching the data with relevant and informed viewpoints. The decision to conduct interviews in Vietnamese facilitated an authentic data collection process, allowing participants to articulate their experiences, challenges, and observations without language constraints, thus enhancing the reliability of the responses.

This study was conducted in compliance with ethical research guidelines and received approval from the Review Board at FPT University, Vietnam. All participants were informed of the study's purpose, their rights to confidentiality and anonymity, and their ability to withdraw at any time without penalty. Informed consent was obtained from all participants prior to data collection, ensuring their voluntary participation.

Research instrument

The interview protocol was systematically developed based on insights gained from an extensive literature review and expert consultations with two PhD scholars on blended learning. Additionally, pilot interviews were conducted with five full-time academics. These initial interviews allowed for an evaluation of the quality, clarity, and relevance of the proposed interview questions, enabling refinements that aligned the questions more closely with the study's objectives and expected outcomes. Feedback gathered from these sessions provided essential adjustments, enhancing the precision and applicability of the questions to the research focus. Additionally, the preliminary interviews provided critical information regarding the optimal length and structure of each interview session, contributing to a framework that was both comfortable and manageable for participants and interviewers. This phase also served as a valuable training opportunity for the interviewers, allowing them to refine their interviewing techniques, improve consistency, and ensure effective data collection. The refinements made as a result of this phase contributed to a more seamless and effective data collection process in the primary study, ultimately strengthening the validity and reliability of the collected data.

Data collection

The main phase of data collection occurred in two distinct waves. First, virtual interviews were conducted with the academic staff, which included administrators, lecturers, and curriculum developers. These interviews aimed to gather insights into their experiences with and observations of the blended learning process. To capture the student perspective, a second set of interviews was conducted then, specifically focusing on students who had previously completed an online survey related to the study. Conducting interviews in two phases allowed the researchers to gather a well-rounded view of blended learning from both the instructional and learner perspectives. Each interview session was structured yet flexible, allowing for probing questions that could delve deeper into emerging themes or clarify initial responses. The data collection approach was designed to ensure a comprehensive, nuanced understanding of each participant's experience and perceptions regarding the blended learning model.

Data analysis

The data gathered from the interviews were analyzed through thematic analysis, following Braun and Clarke's (2006) six-step approach. This rigorous process ensured a systematic and transparent method for identifying, analyzing, and reporting patterns within the data.

1. Familiarization with the Data: The researchers began by immersing themselves in the data through repeated readings of the interview transcripts, enabling a comprehensive understanding of the content and identifying initial ideas.
2. Generating Initial Codes: The data were systematically coded using NVivo software, with relevant excerpts highlighted and labeled to capture meaningful features of the data. This step facilitated the organization of data into manageable segments.

3. Searching for Themes: Codes were then analyzed to identify potential themes by clustering related codes together. This step involved exploring relationships between codes and grouping them into overarching themes that reflected significant patterns across the dataset.
4. Reviewing Themes: The researchers reviewed and refined the candidate themes by cross-checking them against the coded data and the entire dataset, ensuring that each theme was distinct, coherent, and supported by the data.
5. Defining and Naming Themes: Themes were then clearly defined and named to encapsulate their essence and relevance to the research questions. This step involved articulating the scope and focus of each theme in detail.
6. Producing the Report: Finally, the themes were synthesized into a coherent narrative that aligned with the study's aims. Illustrative excerpts from the data were used to substantiate the findings, ensuring the analysis was grounded in participants' perspectives.

NVivo software played a critical role throughout this process, supporting efficient data management, enhancing precision, and ensuring consistency in coding and analysis. This structured approach facilitated a robust interpretation of the data, highlighting important connections between concepts and identifying recurring patterns. By adhering to Braun and Clarke's framework, the thematic analysis provided a rigorous foundation for understanding the nuanced challenges of implementing blended learning in this educational context.

RESULTS

After meticulously coding 30 interview transcripts, a methodical classification of themes and sub-themes related to the benefits of incorporating blended learning has been displayed in Table 1. These themes are noteworthy because they cover five important dimensions: (i) fostering professional knowledge and the development of 21st-century skills; (ii) facilitating learner autonomy; (iii) encouraging lifelong learning and getting ready for the workforce; (iv) developing an innovative educational approach; and (v) fostering international educational experiences.

This analysis is particularly relevant to the enhancement of English as a Foreign Language (EFL) learning, providing insights into how blended learning directly supports the acquisition of language skills within a MOOC framework.

Table 1
Themes and sub-themes on benefits of blended learning

Themes	Definitions of themes	Sub-themes
Theme 1: Fostering professional knowledge and the 21st century skills	Advancing expertise and cultivating the skills necessary for success in the modern day entails fostering the 4Cs (critical thinking, creativity, cooperation, communication), as well as problem-solving abilities, and honing the professional knowledge and skills relevant to one's field of study.	Sub-theme 1.1: Professional knowledge and skills Sub-theme 1.2: The 4Cs and problem-solving skills
Theme 2: Facilitating learner autonomy	Encouraging learner autonomy entails taking responsibility for managing one's own learning in terms of timing, location, subject matter, and speed.	Sub-theme 2.1: Exercising autonomy over controlling one's learning in relation to time and physical environment
		Sub-theme 2.2: Exercising autonomy over one's learning by determining the subject matter and speed
Theme 3: Encouraging lifelong learning and getting ready for the workforce	Encouraging lifelong learning and getting ready for the workforce involves equipping people with the information, abilities, and mindsets they need to keep learning throughout their lifetimes and adjust to shifting cultural, technical, and economic contexts.	Sub-theme 3.1: Lifelong learning skills Sub-theme 3.2: Self-motivation for students' learning and careers
Theme 4: Developing an innovative educational approach	Creating an educational innovation refers to the development and implementation of new approaches, methods, or technologies that transform the way people learn and teach. There are numerous different ways that educational innovation can be included into curriculum design, assessment methods, innovative teaching pedagogies, and educational technology.	Sub-theme 4.1: High-quality and diversified MOOCs learning resources
		Sub-theme 4.2: Personalized learning and formative assessment
Theme 5: Fostering international educational experiences	The process of establishing an international educational experience entails the development and execution of educational programs, activities, or initiatives that facilitate learner interaction with a variety of languages, cultures, and points of view, as well as the cultivation of global attitudes among students.	Sub-theme 5.1: International certificates
		Sub-theme 5.2: International standardized courses

Overall, our analysis revealed key themes and sub-themes evidencing the benefits of blended learning for students' education and future prospects.

Theme 1: Fostering professional knowledge and the development of 21st-century skills

The inaugural theme, fostering professional knowledge and 21st-century skills, elucidates the comprehensive nature of blended learning beyond conventional academic paradigms. It accentuates the delivery of practical knowledge and skills germane to students' chosen disciplines. Implicit in this theme is the imperative for educators and institutions to integrate

practical components within blended courses, thereby augmenting the professional preparedness of graduates. Moreover, blended learning serves as a catalyst for nurturing the 4Cs (critical thinking, creativity, collaboration, and communication) and problem solving abilities, all of which constitute fundamental competencies for thriving in the dynamic landscape of the 21st century. This underscores that the essence of blended learning transcends mere knowledge dissemination; it encompasses the cultivation of critical cognitive and interpersonal proficiencies.

Perspectives from key stakeholders, namely the senior curriculum developer (CD1) and the head of the curriculum development office (CD2), illuminate the expansion of knowledge through Coursera MOOCs. CD1 underscores the significance of unlimited course enrollment, providing students with unprecedented opportunities to delve into multiple courses and accrue certificates. This novel approach, facilitated by the Coursera platform, allows students, such as those in information technology, to explore diverse fields like digital marketing and game design. CD2 emphasizes the allure of uncharted courses from prestigious institutions, enhancing students' learning experiences beyond the confines of traditional curricula. Notably, the availability of both theoretical and practical courses, coupled with robust support for practical exercises, empowers students to engage in hands-on coding experiences. Below are opinions from the two heads of the curriculum development office:

As signing contract with Coursera, the student account does not limit the number of courses a student can take, allowing students to have more chances to study multiple courses and earn certificates afterwards. Such certificates exist in the thousands, each in a unique subject or field. That is an extremely unlikely occurrence in most cases. An IT student, for instance, might enroll in any MOOC in a field other than game design, digital marketing, or an introductory course to game design, among others. (CD1)

Students can access plenty of new courses from famous institutions which have not been yet updated by lecturers. Knowledge is captivating. This method empowers and encourages students to utilize them. On Coursera, there are not just theoretical courses, but also practical courses that provide extensive support for students to apply their knowledge using the platform's data and tools. Students have the ability to program via online platforms. (CD2)

The academic director of Can Tho campus (AD2), the head of the business and management department in Hanoi campus (H3), a software engineering lecturer in Can Tho campus (L1), a management lecturer (L4), and a marketing lecturer (L5) collectively affirm that blended learning stimulates the acquisition of essential 21st-century skills. AD2 underscores that offline sessions catalyze the honing of collaboration, communication, problem-solving, and critical thinking skills. H3 underscores the competency development in independence, responsibility, creativity, initiative, and foreign language proficiency. L1 highlights that active interaction on forums fosters cooperation skills, while L4 underscores the multidimensional content in Coursera videos as a catalyst for critical thinking. Lastly, L5 accentuates the importance of peer review in nurturing critical thinking, creativity, and problem-solving skills. Some of these participants' viewpoints are demonstrated below.

Offline sessions help students gain skills in collaboration, communication, problem solving, and critical thinking. (AD2)

Acquiring the following skills: self-sufficiency, self-directed work, initiative, creativity, and proficiency in another foreign language. (H3)

Students can develop cooperation skills if they actively participate in forums. Students that take part in peer evaluation also become more accountable when working in groups. (L1)

Coursera videos and professors also contain a wealth of multidimensional material that promotes critical thinking if students learn and listen attentively. They have the opportunity to review and apply numerous case studies provided for practice following each instruction. (L4)

If the peer review is seriously implemented, this enables students to develop critical thinking. If students invest time on doing their Coursera assignments carefully and seriously, it offers chances for students to develop creativity and problem-solving skills. (L5)

This collective perspective affirms that the blended learning approach serves as a holistic educational framework, propelling students toward the acquisition of multifaceted competencies essential for success in contemporary professional landscapes.

Theme 2: Facilitating learner autonomy

The second thematic focus, “fostering learner autonomy,” underscores the intrinsic flexibility offered by blended learning, providing students with the autonomy to control the time and space of their educational engagement. Learner autonomy, particularly valuable in EFL contexts, is strongly supported through blended learning, as students have control over the time, space, and content of their study. This is especially beneficial for language learners who need extended time for language exposure, self-paced learning, and the ability to revisit materials.

This dimension of blended learning confers upon EFL students the agency to manage their study schedules and environments, aligning their educational pursuits with individual preferences. The recognition of the intrinsic value EFL students place on autonomy becomes imperative for educators, prompting the design of blended courses that incorporate self-paced learning components and remote accessibility to cater to this intrinsic need. Furthermore, EFL students, in a blended learning setting, gain control over the content and pace of their learning, allowing them to focus on areas of personal interest or those requiring additional support. In response, educators are encouraged to furnish diverse resources and activities within blended courses to accommodate varied learning preferences and paces.

Numerous heads of departments and lecturers within the studied higher education institution collectively expressed the viewpoint that blended learning optimally facilitates students in

controlling their temporal and spatial dimensions of learning. H1 highlights the convenience of online learning, emphasizing the anytime, anywhere accessibility that cultivates a sense of initiative in the learning process. H2, through observation, identifies the proactivity of good and excellent students in self-directed learning, finding intrinsic value in the flexibility of blended learning that aligns with their self-regulated learning styles. Furthermore, L4 highlights the development of autonomy in studying and time management skills through Coursera, where students engage in self-directed learning. L7 posits that students can actively learn online at their own pace, demonstrating autonomy in managing deadlines and multitasking. This collective perspective, encompassing both educators and students, aligns with the premise that blended learning engenders a sense of autonomy in students, offering them the flexibility to dictate their learning trajectories in terms of time, space, content, and pace.

The advantage of online learning is convenience. You can learn anytime and anywhere. You can take the initiative in your learning process. (H1)

During my observation, good and excellent students are quite active in self-learning. They enjoy it because they can have flexible time to extend their knowledge independently. They can seriously study without lecturers' supervision as they know what they should and need to do. Blended learning is valuable for these students. (H2)

Students can develop these two skills including autonomy in studying and time management skills well through Coursera because they completely learn by themselves. (L4)

This helps students learn more actively in terms of time and pace. Offline hours help consolidate and deepen students' knowledge. Students can learn online actively any time as long as they meet the deadlines and can balance multitasks by doing other work while studying for the course. Learners are given more autonomy. (L7)

Student perspectives corroborate these assertions, emphasizing the flexibility and autonomy afforded by blended learning. S3 appreciates the flexibility in scheduling studying time, drawing parallels with online learning practices of foreign YouTubers who seamlessly blend online and offline learning. S5 values the benefits of online learning, highlighting the ability to choose learning spaces and set individual learning paces. This collective insight reinforces the pivotal role of blended learning in fostering learner autonomy, echoing the sentiments expressed by educators.

I'm more flexible with time and arrange my studying time. I follow some foreign YouTubers, they study also online and offline together, they can actively arrange their schedules. It doesn't take much time. That's a point I like with Coursera. (S3)

With online learning, I benefit from time and learning space, I can choose where I want to learn with my own pace. (S5)

By granting students control over their learning process, blended learning provides a valuable structure for EFL learners to develop language proficiency alongside autonomy.

Theme 3: Encouraging lifelong learning and getting ready for the workforce

Blended learning fosters lifelong learning skills, which are essential for EFL learners aiming to maintain language proficiency in changing cultural and professional environments. These skills, including adaptability, information literacy, and a growth mindset, are essential in today's society when continuous learning is not optional but required. Moreover, blended learning promotes self-motivation in students, emphasising the importance for educational institutions and instructors to prioritise both pedagogical tactics and the cultivation of students' intrinsic motivation and agency in their learning journey and career development.

Insights from key stakeholders, such as the head of the English linguistics department in Can Tho campus (H4), the head of the curriculum development office (CD2), and the senior curriculum developer (CD1) in Hanoi campus, underscore the role of blended learning using Coursera MOOCs in contributing to the development of students' lifelong learning skills. For instance, the head of the English linguistics department (H4) underscored that the program's integration of Coursera promotes a commitment to lifelong language learning, one of the explicit program outcomes. Further, this approach aligns with workforce preparation, as students develop language and professional competencies that are highly valued in the global job market. The academic director (AD2) explained that blended learning equips students with essential language and communication skills needed in multinational companies, where English is often the primary language of communication. This model not only prepares students for immediate language needs but fosters an adaptable mindset for lifelong learning in English and beyond.

Also, H4 emphasizes the curriculum's foundation on MOOCs and offline mentoring as instrumental in nurturing students' sense of learning skills and English, with one of the program outcomes explicitly targeting lifelong learning skills. CD1 highlights Coursera's substantive contribution to the cultivation of lifelong learning skills, positioning it as an integral aspect of program outcomes. CD2 further accentuates that blended learning aligns with the university's philosophy of managing students' self-learning, with the overarching objective of fostering lifelong learning skills.

Developing life-long learning skills. (H4)

Yes, it is a curriculum based on MOOCs and offline mentoring that helps students develop lifelong learning skills. Students might cultivate both their sense of learning both skills and English on Coursera. When developing the curricula, one of the program outcomes is lifelong learning skills. Coursera contributes to that lifelong learning skills. (CD1)

Blended learning aims to achieve the university's philosophy which manages students' self-learning. The program learning outcomes aims to develop lifelong learning skills. (CD2)

This perspective highlights the importance of blended learning in not just teaching subject-specific knowledge but also in preparing students with the broader range of skills needed for ongoing learning and future career preparedness. The recognition of blended learning as a driver for lifetime learning is in line with the changing requirements of the modern workforce, enabling students to excel in an environment that requires flexibility, the ability to find and evaluate knowledge, and a mindset focused on continuous development.

Theme 4: Developing an innovative educational approach

Blended learning fosters innovative educational practices by offering diverse, high-quality language materials, such as MOOCs in English, which are beneficial for EFL learners.

According to the Vice-Rector (VR), the Coursera platform provides students access to global-standard language content, which is particularly advantageous for those studying in a non-English-speaking country. The platform offers both theoretical and practical language exercises that enhance EFL students' engagement with authentic language input, fostering comprehension and practical application.

The MOOCs source is increasingly diversified and accessible to a private university like the studied higher education institution. (VR)

Instructors echoed this sentiment, noting that MOOCs allow EFL students to access a wide range of topics in English, which helps them learn language structures in context.

The MOOC content and the MOOC instructor are good. It is taught in English. (L3)

Assignment topics on MOOCs are quite good and practical. (L6)

The Coursera's books are high standards from prestigious universities in the world. (L8)

Moreover, key stakeholders, including the VR and a software engineering lecturer (L8), underscored the efficacy of the blended learning approach in tailoring education to individual student capacities. Personalized learning opportunities based on individual abilities and enhanced autonomy in learning progression emerge as key benefits. The capacity of blended learning to facilitate faster and more in-depth training for competent students is a notable advantage, as acknowledged by L8. The evaluation of students' independent study efforts and comprehension levels in face-to-face sessions further exemplifies the nuanced approach to gauging student understanding and engagement.

Benefiting from individualized learning tailored to one's individual abilities and gaining greater autonomy in the learning process. (VR)

Every teacher employs distinct evaluations. For instance, in the first class, by administering a straightforward examination, we can evaluate the extent to which the pupils' cognitive abilities are satisfactory. Subsequently, we can assess the performance

of the remaining courses by considering the outcomes of the first class. The teacher assigns the topic and assesses in class if his students have independently conducted study and comprehended the problem to a satisfactory degree. (L11)

Lecturers concentrate on the key ideas in brief sessions. The purpose of these classroom exercises was to encourage students to review and share their knowledge. (L7)

To summarise, the institution's dedication to educational innovation is highlighted by the incorporation of MOOCs and the deliberate adoption of blended learning. These efforts demonstrate a comprehensive strategy that includes breakthroughs in technology, improvements in teaching methods, and a dedication to providing personalised, student-focused learning experiences. This collaborative endeavour places the school at the forefront of utilising educational innovation to enhance the teaching and learning environment.

Theme 5: Fostering international educational experiences

In examining the multifaceted dimensions of blended learning, several key themes have emerged, shedding light on its profound implications for contemporary education. Each theme offers a nuanced perspective, contributing to a comprehensive understanding of the transformative potential embedded within blended learning.

Blended learning, through its use of international MOOCs, supports the development of global perspectives in EFL learners, enhancing their cultural awareness and language proficiency. The recognition of the international dimension within the blended learning context is evident in the perspectives shared by the head of the computing fundamental department (H1), marketing lecturer (L5), and information assurance lecturer (L6). Their insights underscored the strategic adoption of Coursera MOOCs, emphasizing the international recognition of certificates and their tangible value in academic and professional realms. The integration of international certificates aligns with the broader goal of cultivating a global worldview among EFL learners, providing them with exposure to diverse cultures, viewpoints, and languages.

Since the 14th batch, the university has applied Coursera MOOCs because they're international programs and provide students certificates that are linked to students' LinkedIn profile. (H1)

Upon completion of the course, students will also be certified. This is considered proof of the learners' learning and knowledge in that field. (L6)

Firstly, they can get certificates to attach to their CVs, which is quite practical. (L5)

A pivotal theme that surfaces is the profound significance of learner autonomy in the blended learning milieu. Students' inclination towards flexibility and control over their learning experiences signifies a paradigm shift towards more student-centered approaches. This theme holds critical implications for educational institutions and instructors, necessitating adaptive measures to align with students' preferences and foster an environment conducive to autonomous learning.

The themes identified in this study reveal that blended learning not only supports general skill development but also provides critical advantages for EFL learners by enhancing language proficiency, autonomy, and global awareness. These insights highlight the role of blended learning in meeting the unique needs of EFL learners, positioning it as a valuable framework for English language acquisition and preparation for global professional environments. The findings underscore the transformative potential of blended learning in developing comprehensive language and professional skills in non-English-speaking contexts, offering a model that aligns with the evolving demands of contemporary education.

DISCUSSION

Professional knowledge and skills

The integration of Coursera MOOCs with in-person mentoring sessions has provided students access to a wealth of current, relevant knowledge from renowned universities, which not only prepares them for a globalized workforce but also offers critical language learning benefits. For EFL learners, exposure to high-quality, authentic English content through MOOCs is invaluable. It enables students to acquire professional vocabulary and contextual language skills relevant to their fields, facilitating both linguistic and professional growth (Kaygorodtseva & Luzgina, 2019). The mentorship component also allows students to refine their language skills through guided discussions and clarification in English, enhancing comprehension and communication abilities essential for EFL learners.

This study supports a model in which students actively engage with English-language MOOCs alongside personalized mentoring, hence reinforcing both professional knowledge and EFL skills. By participating in MOOCs, students practice English in authentic contexts, gaining practical language use that extends beyond traditional academic exercises. This dual benefit aligns with findings from Dhorne et al. (2017) and suggests that blended learning effectively prepares EFL students with the language proficiency and professional knowledge required in diverse career pathways.

The 4Cs and problem-solving skills

The findings indicate that blended learning has a substantial impact on fostering the 4Cs (Collaboration, Communication, Critical Thinking, and Creativity) as well as problem-solving skills, which are particularly pertinent to EFL students. Engaging with English-language MOOCs enhances EFL learners' collaboration and communication skills as they participate in forums, group projects, and peer reviews. These activities necessitate active use of English, thus reinforcing language learning through practical application in collaborative contexts (Purwasih et al., 2021).

Critical thinking and creativity, fostered through case studies and self-assessment exercises, are essential for EFL students as they develop skills in understanding and generating content in English. Instructors are encouraged to implement exercises that require EFL students to

analyze case studies and provide peer feedback in English, which promotes both critical thinking and language fluency. Creativity is further developed through activities like mind-mapping, where students explore and apply English vocabulary and expressions beyond their immediate coursework, supporting deeper language acquisition.

Taking control of students' own learning

The viewpoints of administrators, students, and lecturers strongly emphasise the need to offer students free Coursera accounts for a specific period of time. This setup enabled students to participate in a wide selection of MOOCs, regardless of their academic discipline, and obtain Coursera certifications. In addition, students have the advantage of being able to review MOOC learning materials as frequently as necessary to achieve a thorough comprehension of the curriculum. These results correspond with the conclusions of a previous investigation carried out by Sabre et al. (2022). Both administrators and lecturers emphasised that this technique provided students with a significant level of autonomy in determining their learning pace, enabling them to customise their progress according to their unique learning abilities.

Moreover, the administrator highlighted that the blended learning technique was acknowledged as a proficient method to foster students' independence and enhance their ability to manage their time effectively. The observations align with the findings of Bao and Zhao (2020) and Pham and Ho (2020), who similarly demonstrated the positive impact of blended learning on students' ability to engage in self-directed study.

To summarise, the study recommends further improving the educational setting in Vietnamese higher education institutions, particularly by promoting student-centered and personalised learning approaches. Within this very stimulating educational setting, students are not only motivated but also given the authority to take charge of several aspects of their education, such as the timing, location, topic selection, and pace of their learning pursuits. This proactive approach towards learner autonomy is in line with current educational trends and guarantees that students are more prepared to negotiate the changing terrain of higher education and professional growth.

Lifelong learning skills

Within the scope of this study, both administrators and curriculum developers emphasised the university's strategic goals while choosing a MOOC provider, creating a curriculum based on MOOCs, and implementing blended learning using MOOCs. The main focus of these aims was to develop and oversee students' abilities to engage in lifelong learning and self-directed education. The focus on lifelong learning is a result of the changing requirements of the educational field, where individuals are now expected to participate in ongoing learning throughout their entire lives. Moreover, the study acknowledged the capacity of blended learning to efficiently cater to the educational, economic, and societal requirements of individuals seeking continuous learning. These requirements have become more important as a result of changes in social dynamics (Blieck et al., 2012). MOOCs have become important tools in enabling individuals to actively pursue lifelong learning. MOOCs provide many

opportunities for individuals to enter and access educational content in a flexible manner. This allows learners to independently determine their own learning paths throughout their entire lives (Ossiannilsoo, 2021).

Significantly, the COVID-19 epidemic has intensified the focus on the impact of digital technology-enabled education and training on skill development. MOOCs have attracted significant interest in this regard due to their rapid expansion and the large number of individuals they involve. The growing importance of MOOCs in meeting the increased need for lifelong learning is emphasised by this trend, which is driven by the intersection of social and technical changes in modern societies (Castaño-Muñoz & Rodrigues, 2021).

This study reinforces that blended learning with MOOCs is an effective strategy to develop EFL learners' lifelong learning skills, positioning them to continuously engage with English throughout their careers. Given the importance of ongoing language acquisition, this approach helps students adapt to the evolving linguistic demands of the global job market, ensuring that they are equipped for a range of English-speaking professional environments.

Self-motivation for Students' learning and careers

The knowledge obtained from both administrators and curriculum developers clarified the function of MOOCs in the context of blended learning as a catalyst for promoting self-directed learning among students. MOOCs have been discovered to empower students by allowing them to customise their learning experiences according to their specific requirements and goals. This enables them to recognise and get knowledge and skills that are important to their future career paths. Essentially, students demonstrated a self-driven desire to participate in MOOCs, motivated by their inherent urge to improve their educational experience and career opportunities. This pattern is consistent with previous research, including the findings of Nguyen (2022), who highlighted the significant benefit of Coursera credentials in enhancing students' employment opportunities. Previous research has emphasised the optimism of MOOC participants in terms of the ability of MOOCs to aid in job searching and career progression (Rivas et al., 2020).

Instructors play a crucial role in guiding EFL learners to utilize MOOCs for career-related language development by encouraging students to align their learning paths with professional goals. This study suggests that by making explicit connections between English-language coursework and career applications, instructors can further motivate EFL students to actively pursue language proficiency within the blended learning framework.

High-quality and diversified MOOCs learning resources

MOOCs on platforms like Coursera offer high-quality English-language resources, which are integral to EFL learning within the blended learning framework. Faculty feedback underscores the availability of authentic language materials, including lectures, assignments, and projects sourced from globally renowned universities, which provide EFL students with exposure to advanced academic and professional English (Jha & Naaz, 2020). This access to a diverse range

of English-language content enables students to engage with academic language at an international standard, which is essential for their language development.

Moreover, the claim stated by Ho et al. (2023) strengthens the current perception of MOOCs as providers of top-notch educational materials. The participation of esteemed universities in delivering course content via MOOCs is recognized as a significant aspect of enhancing the overall quality of educational resources. The similarity between the current findings and existing research highlights the consistency and strength of the discussion about the quality characteristics of MOOCs.

Furthermore, the rigor of assignments and assessments within English-language MOOCs encourages EFL learners to apply language skills in practical contexts, enhancing comprehension and communication proficiency. This study highlights the role of MOOCs as a valuable supplement to traditional EFL resources, offering EFL students a comprehensive set of tools for building language proficiency through exposure to high-caliber, globally relevant materials.

Personalized learning and formative assessment

The discourse surrounding personalized learning and formative assessment within the realm of blended learning, particularly through the utilization of MOOCs, reflects a nuanced understanding of how educational strategies can be tailored to individual learners. Administrators and lecturers, in their preliminary statements, emphasized the inherent capacity of blended learning to cater to personalized learning experiences, allowing students to exercise control over their learning trajectories based on their individual abilities. This resonates with the broader conceptualization of blended learning as a modality that addresses learners' needs and encourages self-directed learning (Jebraeily et al., 2020).

In a detailed examination of MOOCs, educators expressed additional methods to improve the flexibility of learning experiences beyond the standard tools and features provided by the MOOC platform. This encompasses several interventions, such as adjustable deadlines, a wide range of course assignments, virtual office hours, the integration of multimedia elements, interactive case studies, and the inclusion of guest speakers. These tactics emphasize the dedication to customizing the educational experience within the vast realm of MOOCs. In addition, instructors utilized different formative tests during in-person mentoring meetings to evaluate students' understanding and dedication to independent study in MOOCs. This pedagogical approach is consistent with previous research, particularly Sebbah's (2021) study, which highlights the advantages of ongoing student assessment in both traditional and digital learning settings. The smooth incorporation of formative assessments is suggested as a catalyst for promoting thoughtful engagement, cooperative learning, providing support, and meticulous monitoring of progress.

The practices observed in this study align with the claims made by administrators and lecturers and are supported by previous scholarly research. The correlation between recent discoveries and existing research underscores the lasting importance of personalized learning and formative evaluation in enhancing the effectiveness of blended learning methods, especially within the vast realm of Massive Open Online Courses (MOOCs).

International certificates

Administrators and instructors in the present study highlight the significant importance of foreign certifications in the context of blended learning, particularly through the Coursera platform. These certificates hold more significance than just recognizing academic success; they serve as concrete evidence that qualifies students to take final exams at Vietnamese higher education institutions. In addition, the certificates have a prominent position on students' resumes, enhancing their professional profiles. They may also be easily connected to their LinkedIn sites, so increasing their legitimacy and worth. A previous study conducted by Anh et al. (2019) supports the current findings since it emphasizes that administrators see blended learning as a means to improve an institution's quality by providing students with internationally recognized certifications from prestigious universities. This viewpoint aligns with the current belief that certificates obtained from reputable institutions hold substantial value in verifying the excellence and worldwide applicability of educational programs.

In addition, the research conducted by Anh et al. (2019) enhances the ongoing discussion by explicitly recognizing Coursera as a supplier of MOOCs that can offer students valuable credentials upon successfully finishing the courses. This confirms the long-lasting impact that MOOCs, and by extension blended learning, have on the certification environment.

This study supports the role of MOOCs in providing EFL students with credentials that reflect both linguistic and subject-matter competencies, making them more competitive in international career paths. The prestige of certifications from top institutions further adds to the perceived value, as they provide EFL learners with validation of their English skills that is recognized globally.

International standardized courses

The agreement among administrators, curriculum developers, and lecturers in the present investigation emphasizes the crucial significance of Coursera in granting students at the Vietnamese higher education institution the opportunity to access MOOCs selected by esteemed global universities such as Yale University, Stanford University (USA), University of Hong Kong, and NUS (Singapore). This collaborative observation confirms the potential for blended learning, particularly through MOOCs, to enable the incorporation of globally recognized and standardized courses into the educational framework of the Vietnamese institution. The present study is in line with previous research that acknowledges the importance of globalized educational experiences. Prior studies conducted by Nguyen (2023) and Ossiannilsson (2021) have emphasized the democratizing impact of MOOCs in providing learners with the opportunity to access courses created and taught by globally recognized experts and institutions. The democratization of education enables students to transcend geographical borders and gain exposure to other ideas. Furthermore, the findings align with the broader discussion on the impact of international education in promoting global citizenship. Ho et al. (2022) literature highlighted the significant influence of internationalized curricula in making students become global citizens who can excel in international professional settings. The current study, sponsored by Coursera, exposes students to standardized courses offered

by globally respected universities. This coincides with the concept of creating a globalized attitude among students.

This alignment with global educational standards fosters a sense of global citizenship in EFL learners, preparing them to navigate international academic and professional contexts effectively. The current study reaffirms that blended learning, by providing access to internationally standardized English-language courses, enables EFL students to transcend linguistic and cultural barriers, enhancing their language proficiency and adaptability in a globalized world.

CONCLUSION

The successful development of learner autonomy in blended learning, including MOOCs, requires a systematic approach that enables students to take charge of their educational progress. At the core of this process is the crucial function of professors who provide guidance and assistance to students in exercising independence in their academic endeavours. The structured approach begins by initiating the course, prompting students to create personalised learning objectives and complete plans to accomplish them.

Additional assistance entails motivating students to actively engage in structured self-reflection, facilitating ongoing assessment of their learning progress, and the adjustment of tactics as necessary. Peer assessments integrated into assignments are crucial for cultivating interdependence and shared responsibility, thereby facilitating collaborative learning. Students can deepen their learning in a blended MOOC model by using their Coursera accounts to study topics beyond mandatory courses, thereby broadening their knowledge. The Vietnamese higher education institution highlights the necessity for students to take advantage of blended MOOCs, emphasizing the importance of acquiring and strengthening lifelong learning abilities. By acknowledging these talents as essential assets for both ongoing education and professional achievement, students are prepared to effectively negotiate the ever-changing terrain of education and employment.

To ensure the quality of MOOC-based curricula, the Curriculum Development department must continually enhance its selection of high-quality and diversified MOOCs that are uniquely relevant to the Vietnamese environment. Instructors are recommended to employ a variety of teaching techniques during face-to-face mentoring sessions, such as introspection, jotting down notes, providing helpful comments, self-evaluation, and peer evaluation. The blended learning method encourages personalized learning and continuous assessment.

It is essential for students to actively make use of their free Coursera accounts each semester. They should participate in self-directed MOOCs within and beyond their fields of study in order to obtain international credentials. These certificates act as physical proof of finished MOOCs, enhancing their profiles for potential future job prospects.

Ultimately, this study supports the idea of actively involving students in internationally recognised courses, with a focus on promoting optimistic mindsets and exemplary conduct. Active participation is considered crucial for a more enriching educational experience and improved preparedness for the challenges of the global professional world.

Conflict of interest

We certify that there is no conflict of interest with any financial, personal, or other relationships with other people or organizations related to the material discussed in the manuscript.

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