A Systematic Review on the Effects of Blended Learning in EFL Higher Education Contexts

Le-Anh-Phuong Nguyen
University of Social Sciences and Humanities, Vietnam National University Ho Chi Minh City
10-12 Dinh Tien Hoang Street, District 1, Ho Chi Minh City
Corresponding Author Email: phuongnguyennvn@hcmussh.edu.vn

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Abstract
Driven by the demand for innovative pedagogies in higher education, blended learning (BL) is increasingly being recognized as an effective technique to improve English as a Foreign Language (EFL) learning. This research provides a systematic review on the effects of BL in EFL higher education contexts. The review utilizes rigorous search and selection criteria to ensure that only high-quality research is explored using the PRISMA approach. Drawing on 15 studies published from 2022 to 2024 obtained through Scopus and Springer Link database searches, we synthesize key findings regarding the effects of BL on promoting language skills, student engagement, motivation, and autonomy within EFL learning. This review offers valuable insights for educators and researchers interested in optimizing BL approaches for effective EFL learning and academic success in diverse higher education settings.

Keywords: Systematic Review, Blended Learning, EFL, Higher Education

Introduction
BL, as a combination of traditional face-to-face learning and online learning, aims to create a learning atmosphere that promotes self-directed learning and provides several advantages (Garrison & Kanuka, 2004; Graham, 2006). BL’s popularity is growing because of its distinctive capacity to overcome the constraints of conventional classroom instruction and fully online learning settings. This trend is particularly pronounced in higher education in the post-pandemic era (Cobo-Rendón et al., 2022).

The higher education sector is now experiencing a significant transformation, driven by the advancement of technology and changing expectations of learners. Within this ever-changing context, the field of EFL education has the task of not only providing students with language skills but also promoting active participation and self-directed learning (Prihastiwi & Rochsantiningsih, 2017). BL has become a powerful option that has the potential to enhance EFL learning experiences in higher education settings (Zhao et al., 2023).

Despite the increasing trend in research on BL in EFL higher education settings, systematic reviews have focused more on analyzing studies published prior to 2022 and investigating its effects on each specific skill, as shown by the research of (Altay and Altay, 2019; Qiu et al., 2022; Ismail and Yassin, 2023). Thus, this systematic review was conducted to address a gap by providing a critical analysis of the current research landscape surrounding the effects of BL.
in EFL higher education contexts, with a specific focus on studies published in the post-pandemic era (between 2022; 2024). This timeframe is particularly relevant as it reflects a period of significant adaptation and innovation in educational practices, influenced by the long-term effects of the global pandemic on teaching and learning modalities. This study's significance lies in its potential to transform EFL higher education by providing empirical insights into the effectiveness of blended learning approaches. The research goal is to provide insights into how BL can promote EFL skill development, enhance student engagement and motivation, and foster autonomy within the learning process in the post-pandemic era.

The utility and effectiveness of this systematic review extend to a wide range of stakeholders in higher education. For educators, it offers a critical analysis of the effects of BL on students in EFL settings, thereby realizing the need to improve teaching effectiveness and student outcomes by applying BL. Academic institutions can utilize the findings to inform curriculum development, instructional design, and resource allocation, ensuring that EFL programs align with current educational technologies and approaches. This study will also provide vital insights to policymakers and educational technologists on how to optimize blended learning environments to cater to the different demands of learners in a continuously evolving world. Furthermore, this study offers some suggestions for future research directions.

Research Questions
This systematic review aimed to address the following research questions:

1. To what extent does BL positively impact specific EFL skills, such as vocabulary and acquisition, reading comprehension, writing proficiency, speaking fluency, and listening comprehension, in higher education settings?

2. How does BL influence student engagement, motivation, and autonomy within the EFL learning process in higher education contexts?

Methodology
To provide a concrete and comprehensive understanding of the effects of BL in EFL higher education contexts, we carried out a systematic review based on Preferred Reporting Items for Systematic Reviews and Meta-Analysis guidelines (PRISMA) (Page et al., 2021). Accordingly, the research process follows three main steps of a systematic literature review: identifying the literature, screening the literature, and including papers (Fig. 1). The retrieved papers were collected in an Excel file to allow screening and reviewing. The reference is managed by EndNote 20.

Search Strategy
We searched the following research databases: Scopus and Springer Link. The systematic review research search limited the publication period from January 2022 to January 2024 to provide a concrete and comprehensive understanding of the effects of BL in EFL higher education contexts in the post-pandemic era. Selecting the appropriate keywords is another crucial step in any systematic review as they determine the articles to be retrieved. Therefore, the searching keywords were (blended AND EFL OR English AND higher education OR HEI* OR university* OR college*) (Figure 1). We opted for the keyword “blended” rather than “blended learning” due to the fact that this approach is presently referred to by various terms, including blended teaching, blended instruction, blended education, and so on. By conducting a research search using the keyword “blended”, we are able to obtain more comprehensive results for the screening process.
Inclusion and Exclusion Criteria
With the intention of conducting our research, we established precise criteria to assist us in evaluating the numerous studies, selecting and incorporating those related to our research issue, and excluding those that do not satisfy certain essential conditions. The inclusion and exclusion criteria are given in Table 1.

Table 1

<table>
<thead>
<tr>
<th>Inclusion criteria</th>
<th>Exclusion criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Papers dated January 2022 or after</td>
<td>Papers dated before January 2022</td>
</tr>
<tr>
<td>Involved BL in EFL contexts</td>
<td>Not involved BL</td>
</tr>
<tr>
<td>Involved BL in higher education</td>
<td>Not in EFL contexts</td>
</tr>
<tr>
<td>Involved BL in higher education</td>
<td>Not in higher education</td>
</tr>
<tr>
<td>Papers written in English</td>
<td>Papers written in another language</td>
</tr>
<tr>
<td>Papers including evidence (whether</td>
<td>Papers not including evidence (whether</td>
</tr>
<tr>
<td>qualitative or quantitative)</td>
<td>qualitative or qualitative)</td>
</tr>
<tr>
<td>Peer-reviewed journal articles</td>
<td>Conference papers, review articles, or book chapters</td>
</tr>
<tr>
<td></td>
<td>Duplicates</td>
</tr>
</tbody>
</table>

Selection of Articles and Data Extraction
A total of 350 items were identified based on the keywords, which included 08 identical articles and 02 articles published in 2021. The researcher then removed 10 articles for duplicates and for other reasons, resulting in a remaining count of 340 articles. During the screening of article titles and abstracts pertaining to the research questions, 312 articles were removed, and 28 more were left by using the inclusion and exclusion criteria. After the full-text screening phase, only 19 articles met the eligibility criteria. Upon conducting a thorough examination of all articles during the full-text screening step to determine eligibility, 04 articles were excluded due to their full text, including material that was irrelevant to “BL (only mentioned online learning)”, “effects of BL on EFL skills” and “university students”.
Results and Discussion

Based on our in-depth analysis of the literature, we synthesized key findings on BL’s effects in promoting EFL skill development, particularly regarding vocabulary and grammar acquisition, speaking, listening, reading, and writing proficiency. Additionally, we explored the influence of BL on student engagement, motivation, and autonomy within EFL learning. In Table 2, the summary of reviewed papers was presented by country of the research, theme, method, and participants.
<table>
<thead>
<tr>
<th>Main Author</th>
<th>Year</th>
<th>Country</th>
<th>Theme</th>
<th>Method</th>
<th>Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alghofaili</td>
<td>2022</td>
<td>Saudi Arabia</td>
<td>Effects of BL on EFL student engagement and motivation</td>
<td>Quantitative</td>
<td>232 students</td>
</tr>
<tr>
<td>Ali</td>
<td>2023</td>
<td>Saudi Arabia</td>
<td>Effects of BL on EFL student engagement, motivation; Effects of BL on students’ EFL skill development</td>
<td>Mixed method</td>
<td>120 students (quantitative); 4 teachers and 4 students (qualitative)</td>
</tr>
<tr>
<td>Aydin</td>
<td>2022</td>
<td>Turkey</td>
<td>Effects of BL on students’ EFL skill development; Effects of BL on EFL student engagement, motivation and autonomy</td>
<td>Mixed method</td>
<td>76 students</td>
</tr>
<tr>
<td>Chang</td>
<td>2023</td>
<td>China</td>
<td>Effects of BL on students’ EFL skill development; Effects of BL on EFL student motivation</td>
<td>Mixed method</td>
<td>33 students</td>
</tr>
<tr>
<td>Chen</td>
<td>2022</td>
<td>China</td>
<td>Effects of BL on students’ EFL skill development; Effects of BL on EFL student engagement, motivation and autonomy</td>
<td>Mixed method</td>
<td>120 students</td>
</tr>
<tr>
<td>De Vega</td>
<td>2023</td>
<td>Indonesia</td>
<td>Effects of BL on students’ EFL skill development</td>
<td>Quantitative</td>
<td>80 students</td>
</tr>
<tr>
<td>Dousti</td>
<td>2023</td>
<td>Iran</td>
<td>Effects of BL on students’ EFL skill development</td>
<td>Quantitative</td>
<td>71 students</td>
</tr>
<tr>
<td>Ebadi</td>
<td>2023</td>
<td>Iran</td>
<td>Effects of BL on students’ EFL skill development</td>
<td>Mixed method</td>
<td>60 students</td>
</tr>
<tr>
<td>Fischer</td>
<td>2022</td>
<td>Taiwan</td>
<td>Effects of BL on students’ EFL skill development</td>
<td>Quantitative</td>
<td>54 students</td>
</tr>
<tr>
<td>Huang</td>
<td>2022</td>
<td>China</td>
<td>Effects of BL on students’ EFL skill development</td>
<td>Mixed method</td>
<td>146 students</td>
</tr>
<tr>
<td>Khodabandeh</td>
<td>2022</td>
<td>Iran</td>
<td>Effects of BL on students’ EFL skill development</td>
<td>Quantitative</td>
<td>80 students</td>
</tr>
</tbody>
</table>
Eleven examined studies emphasized the effects of BL on university students' EFL skills (Aydın et al., 2022; Chang, 2023; Chen, 2022; De Vega et al., 2023; Dousti & Amirian, 2023; Ebadi et al., 2023; Fischer & Yang, 2022; Huang et al., 2022; Khodabandeh, 2022; Mohamed, 2022; Qays et al., 2022; Yan, 2022). All reported skills included vocabulary (Aydın et al., 2022; Chang, 2023; Ebadi et al., 2023), grammar Aydin et al (2022); Ebadi et al (2023), speaking Ali et al (2023); Chang (2023); De Vega et al (2023); Ebadi et al (2023); Fischer & Yang (2022); Mohamed (2022), listening Chang (2023); De Vega et al (2023); Ebadi et al (2023); Mohamed (2022), reading Huang et al (2022); Mohamed (2022); Yan (2022), writing Chang (2023); Dousti & Amirian (2023); Huang et al (2022); Khodabandeh (2022); Mohamed (2022), and translation Chen (2022) skills. Among them, most research indicates that BL has positive effects on the development of university students' EFL skills.

Mohamed (2022) conducted a study to determine how BL enhances cooperation and EFL learning in higher education, which was assessed in this review. As this study has found, up to 49.1% of the students surveyed acknowledged that BL classes enhanced their proficiency in all four language skills. Similar findings were published in a more recent study by Chang (2023), who conducted the study to test the effectiveness of using massive online open courses (MOOCs) and data-driven learning activities on EFL skills among 33 first-year students enrolled in an English course at a university in Taiwan. The findings from both the pre-test and post-test indicated that the participants' academic listening abilities improved significantly (t(32) = 4.778, p < 0.001). A Cohen's d value of 0.80 suggested a substantial effect magnitude. Another study by Ebadi et al (2023) explored the impact of mobile-based extracurricular English activities, like movies, games, and music, on the vocabulary development of intermediate learners by using a mixed-methods design. 60 students from two language institutes participated, evenly divided by gender. The findings from the experimental group demonstrated that engaging in extramural English activities using mobile devices had a substantial effect on the students' acquisition of vocabulary (p < 0.001). Interestingly, gender played no significant role (p = 0.34), suggesting both male and female
students benefited equally, consistent with the findings of (Chang, 2023). Moreover, these study results suggest that language instructors should include additional virtual and online-based extramural English activities to complement conventional vocabulary teaching methods. However, the research included in this review provided a comprehensive overview of the effects without explicitly specifying them. Hence, future studies should address this gap.

The results of this review align with several previous studies. Yu and Du (2019) discovered that BL had a good impact on students’ EFL abilities, particularly in the areas of listening and speaking competence. Similarly, another study by Albiladi and Alshareef (2019) revealed that the integration of online components and technology-based activities in EFL courses can enhance students' listening and speaking abilities, as well as their overall language proficiency. Additionally, BL provides opportunities for improving their writing skills. Alsmari (2019) aimed to examine the impact of using Edmodo, a Web 2.0 application, as a supplementary BL tool in enhancing the paragraph writing abilities of Saudi EFL students at Prince Sattam bin Abdul Aziz University, KSA. The researcher examined the process of enhancing the paragraph-writing abilities of EFL students by using the Edmodo platform. A total of 80 college-level students specializing in English participated. In another study, Saad et al. (2020) investigated the effects of the use of online discussion boards on EFL students’ learning in their blended course, particularly their achievement in academic writing. The research conducted by Saad et al. (2020) included a sample of 56 undergraduate students, including both males and females. Particularly, the participants were separated into two groups: the experimental group consisted of 28 students, while the control group also consisted of 28 students. This is because students’ learning styles have influenced their achievement, and if mediated in a hybrid learning environment like blended learning, this will further result in the evaluation and performance of the blended learning environment.

In general, it is evident that the influence of BL on students’ development of EFL skills remains beneficial, regardless of whether it is before, during, or after the pandemic. This unequivocally demonstrates the significance of BL in enhancing student performance in EFL abilities.

**Effects of BL on student engagement, motivation, and autonomy in EFL higher education contexts**

Eleven of the reviewed studies revealed a positive relationship between BL and EFL university student engagement (Ali et al., 2023; Alghofaili, 2022; Aydin & Çakır, 2022; Chen, 2022; Dousti & Amirian, 2023; Huang et al., 2022; Khodabandeh, 2022; Mohamed, 2022; Qays et al., 2022; Zhao et al., 2023), motivation (Aydin & Çakır (2022); Chang (2023); Chen (2022); Mohamed, (2022); Qays et al (2022)), and autonomy (Alghofaili, 2022; Aydin & Çakır, 2022; Chen, 2022; Huang et al., 2022; Khodabandeh, 2022; Qays et al., 2022).

In a study done by Chen (2022), mixed-methods research was used to assess the efficacy of BL in enhancing student autonomy. The study included a sample of 120 university students, both male and female, who were enrolled in a translation course in China. The research results show the majority of students determine BL is a good way to help them become more independent learners. These students exhibit significant levels of learning motivation (M = 4.19) and learning engagement (M = 4.01). Their level of learning independence is relatively high (M = 3.88), indicating that teachers remain to play a significant role, even within a blended learning setting. Aydin and Çakır (2022) as well as Khodabandeh (2022) supported this claim in their reviews. Their studies also emphasize the practical significance of employing a framework or training program for teachers when incorporating technology-enhanced
learning tools (such as commercially available games and virtual reality applications) into their BL curricula. The results of Khodabandeh (2022)’s study might facilitate the integration of virtual reality technology into both online and traditional courses alleviating concerns about the varying responses of learners with diverse personality qualities. This finding is in line with a prior investigation conducted by Permadi and Aditya (2021), which shown that the incorporation of design learning aspects and the resulting learning outcomes had a substantial impact on the execution of BL; conversely, student characteristics were found to have an insignificant affect.

Chang (2023) provided evidence that educational platforms also influence student motivation. Specifically, the students' inclination to persistently use AntConc independently in the future was comparatively less than their inclination to persistently utilize Coursera, with just 33% of students expressing their intention to use AntConc in the future, in contrast to 81% who expected to continue using Coursera. The study conducted by Zhao et al (2023) revealed that the combination of blended learning (BL) and problem-based learning had a significant impact on students' behavioral (pre-survey: M = 2.7880; post-survey: M = 3.0561), cognitive (pre-survey: M = 2.8022; post-survey: M = 3.0443), and emotional engagement (pre-survey: M = 2.7801; post-survey: M = 3.0741) following an 8-week intervention. Additionally, the qualitative results confirmed that students acknowledged the beneficial impact of incorporating problem-based learning into BL. It highlighted the significance of direct communication, a learning management system (LMS), and the availability of captivating resources and materials as crucial factors in promoting student engagement in BL. This finding aligns with the research conducted by Prifti (2020), which examined the elements influencing the self-efficacy of LMS and its influence on student satisfaction. Additionally, this study unveiled that an instructor in BL has a crucial part in fostering student motivation.

Summarizing the findings of this systematic review, the research analyzed demonstrated that BL has effects on student engagement, motivation, autonomy, and achievement within the EFL learning process in higher education contexts.

**Conclusion**

To summarize, this systematic review makes significant contributions to both the theoretical and practical aspects of the effects of BL in EFL higher education contexts. The findings suggest that BL can be an effective approach for improving EFL students' learning. Specifically, students in BL programs achieved higher academic outcomes, demonstrated better language skills, and exhibited more positive engagement, motivation, and autonomy compared to students in traditional EFL programs. The research also highlighted a number of factors that can contribute to the success of BL programs, such as strong instructional design, effective use of technology, and well-trained teachers. These factors should be considered by educators and researchers who are interested in optimizing BL approaches for EFL learning. In addition, the review identified several areas for future research. Further investigation is required about the long-term effects of BL on EFL learning, the impact of BL on different groups of students, and the most effective methods for incorporating BL into diverse EFL curricula.
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