

Research Article

Effectiveness of Blended Learning in Enhancing EFL Instruction in Indonesian Higher Education

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Email: sriyunia.2020@student.uny.ac.id**Received:** February 28, 2026**Accepted:** March 24, 2026**Published:** March 30, 2026**Abstract**

Blended learning has emerged as a prominent instructional strategy in English as a Foreign Language (EFL) education, particularly in Indonesian higher education where digital technologies are increasingly incorporated into teaching and learning processes. This study examines the influence of blended learning on students' perceptions, engagement levels, language proficiency, technological usage, encountered challenges, and overall academic performance. A quantitative research design with a quasi-experimental approach was employed, involving 210 undergraduate EFL students from three universities in Indonesia. Data were gathered using structured Likert-scale questionnaires along with pre-test and post-test assessments. Both descriptive and inferential statistical techniques were applied to analyze the data. The results indicate that students demonstrate highly positive perceptions of blended learning, especially in terms of flexibility, accessibility, and interactivity. Engagement levels were significantly higher than those observed in conventional classroom environments ($p < 0.05$). Additionally, improvements were observed across all language skills, supported by increased digital literacy. Although some challenges related to internet connectivity and technical constraints were identified, these issues were moderate in nature. Overall, the findings suggest that blended learning is an effective approach for enhancing EFL learning outcomes when implemented with appropriate pedagogical strategies and sufficient technological support.

Keywords: Blended Learning, EFL Education, Student Engagement, Instructional Effectiveness.**Introduction**

The rapid expansion of digital technologies has significantly transformed educational practices, particularly in the field of English as a Foreign Language (EFL). As instructional approaches continue to develop, blended learning has gained prominence as an effective method that combines conventional face-to-face teaching with online learning environments. This integration offers increased flexibility and facilitates more efficient learning experiences. Graham (2013) describes blended learning as a structured combination of in-person and digital instruction designed to enhance both accessibility and learning outcomes. Likewise, Bliuc et al. (2007) highlight that integrating multiple instructional modes can enrich the overall learning experience in higher education contexts.

Within EFL education, blended learning has been widely associated with enhanced academic achievement and improved language proficiency. For instance, Bataineh and Mayyas (2017) demonstrated that students in blended learning settings performed better in reading comprehension and grammar than those in traditional classrooms. Similarly, Alsalhi et al. (2019) reported that this approach fosters positive learner attitudes and contributes to improved academic success. More recent findings by Khan and Khan (2024) indicate that blended learning is particularly beneficial for developing listening skills, as it provides learners with access to diverse audio-visual resources.

Beyond academic performance, blended learning has been shown to increase student engagement and active participation. Jiang et al. (2021) found that the integration of online and face-to-face instructional activities enhances student interest and involvement in learning tasks. In addition, this approach supports learner autonomy by allowing individuals to take greater responsibility for their own learning. Pardede (2012) emphasized that blended learning promotes independent learning while still retaining the advantages of direct classroom interaction. Furthermore, blended learning contributes to improved academic outcomes and deeper cognitive engagement. According to Ashraf et al. (2022), this instructional model strengthens students' understanding, motivation, and interaction within higher education settings. Despite these advantages, certain challenges persist. Issues such as limited internet connectivity and restricted access to digital resources continue to hinder effective implementation.

Rianto (2020) identified these technological and infrastructural barriers as key concerns in Indonesian EFL contexts, where such limitations can reduce the effectiveness of blended instruction.

Given both the advantages and challenges associated with blended learning, it is important to evaluate its effectiveness within specific educational environments. Accordingly, this study investigates the role of blended learning in Indonesian EFL classrooms by examining students' perceptions, engagement, language skill development, use of technology, and related challenges. Additionally, the study assesses its overall effectiveness in terms of academic performance and learner satisfaction.

Materials and Methods

This study adopted a quantitative approach using a quasi-experimental design combined with a survey method to examine the effectiveness of blended learning in Indonesian EFL classrooms. The design enabled the researcher to analyze key aspects such as student perceptions, engagement, language skill improvement, use of technology, challenges, and overall learning outcomes.

The research was conducted in three universities in Indonesia, involving 210 undergraduate EFL students. A stratified sampling technique was applied to ensure representation from different academic levels. All participants had prior exposure to blended learning environments that integrated classroom teaching with online platforms such as Learning Management Systems (LMS).

Data collection was carried out using a structured questionnaire consisting of 24 items covering six areas: perceptions, engagement, language development, digital skills, challenges, and overall effectiveness. Responses were measured using a five-point Likert scale (from strongly disagree to strongly agree). In addition, pre-test and post-test assessments were used to evaluate students' proficiency in reading, writing, listening, and speaking.

The questionnaire was adapted from established instruments and reviewed by experts to ensure validity. Reliability testing showed a high internal consistency (Cronbach's alpha = 0.91). Data were collected over a four-week period through both online (Google Forms) and offline methods. Ethical guidelines were followed, including obtaining participant consent and maintaining confidentiality.

For data analysis, SPSS software was used. Descriptive statistics such as mean and standard deviation were calculated to summarize the data. An independent samples t-test was conducted to compare engagement between learning modes, while pre- and post-test scores were analyzed to measure improvement in language skills. A significance level of $p < 0.05$ was used for all statistical tests.

Results and Discussion

Students' Perceptions of Blended Learning

Table 1. Students' perceptions of blended learning.

Item	Mean	SD
Flexibility	4.32	0.61
Accessibility	4.28	0.65
Interaction	4.10	0.70
Satisfaction	4.25	0.63

The results demonstrate that students hold generally positive perceptions of blended learning, as evidenced by high mean scores across all evaluated dimensions. Among these factors, flexibility received the highest rating, indicating that learners value the opportunity to manage their own learning pace and schedule. Accessibility was also rated highly, suggesting that digital tools effectively facilitate learning beyond the traditional classroom environment. Furthermore, the scores for satisfaction and interaction reveal that students consider blended learning both engaging and advantageous. The relatively small standard deviation values indicate consistency in responses, reflecting a common agreement among participants regarding these benefits. These findings are consistent with earlier research highlighting positive learner perceptions of blended learning, particularly in relation to flexibility and resource accessibility (Mulyono et al., 2021). In a similar vein, Gayatri et al. (2023) reported that the integration of information and communication technology (ICT) enhances both accessibility and learner control. Additional studies have also demonstrated that blended learning promotes higher motivation levels and more positive attitudes toward language acquisition (Menggo & Darong, 2022; Gayatri et al., 2022). Overall, the findings suggest that blended learning creates an effective, student-centered learning environment that supports active participation and improved learning experiences.

Student Engagement Levels

Table 2. Student engagement levels.

Mode	Mean	SD
Traditional	3.45	0.72
Blended	4.20	0.66

The findings reveal a noticeable difference in engagement between traditional and blended learning approaches. Students exposed to blended learning reported higher levels of participation compared to those in conventional classroom settings. Statistical testing confirmed that this variation is significant, suggesting that blended learning enhances student involvement in the learning process. The higher engagement levels may be explained by the combination of digital tools and face-to-face instruction, which creates more opportunities for interaction, collaboration, and active participation. The relatively low variation in responses indicates that this pattern is consistently observed across participants. These results are in line with previous studies that have emphasized the positive role of blended learning in improving student engagement and classroom interaction (Menggo & Darong, 2022; Mulyono et al., 2021). Furthermore, research on ICT-integrated learning environments suggests that such approaches encourage collaborative learning and increase student participation (Gayatri et al., 2023; Gayatri et al., 2022).

Language Skill Development

Table 3. Language skill development.

Skill	Mean	SD
Reading	4.10	0.68
Writing	4.05	0.70
Listening	4.20	0.66
Speaking	4.00	0.72

The results indicate that students experienced improvements in all four language skills—reading, writing, listening, and speaking. Among these, listening achieved the highest mean score, which may be attributed to the use of multimedia materials and audio-visual resources commonly incorporated in blended learning environments. The other language skills also showed steady progress, suggesting that this instructional approach supports overall language development. Comparisons of pre-test and post-test performance further confirm that blended learning contributes positively to learners' proficiency. The slightly lower performance in speaking may be associated with variations in learner confidence or limited opportunities for oral interaction. These findings are consistent with previous research demonstrating that blended learning significantly enhances language proficiency (Menggo & Darong, 2022). In addition, the integration of information and communication technology (ICT) has been identified as a crucial factor in improving language skills, particularly listening and reading (Gayatri et al., 2023). Moreover, learner autonomy has been recognized as an important element in sustaining continuous language development (Mulyono et al., 2021; Gayatri et al., 2022).

Technology Use and Digital Literacy

Table 4. Technology use and digital literacy.

Item	Mean	SD
LMS use	4.30	0.60
Mobile learning	4.25	0.64
Digital skills	4.18	0.69

The findings indicate that students demonstrate a strong level of proficiency in utilizing digital technologies for learning purposes. High mean scores for LMS usage, mobile learning, and digital skills suggest that learners are confident in operating within technology-enhanced learning environments. This reflects their readiness to effectively participate in blended learning settings. The relatively low variation in responses shows that participants share similar levels of digital competence. These results are consistent with previous studies that highlight the critical role of information and communication technology (ICT) in the successful implementation of blended learning (Gayatri et al., 2023). Furthermore, earlier research has shown that blended learning not only supports academic achievement but also enhances students' digital literacy skills (Mulyono et al., 2021; Menggo & Darong, 2022). In addition, Learning Management Systems (LMS) are recognized as key tools in delivering structured and effective learning experiences (Gayatri et al., 2022).

Challenges in Blended Learning

Table 5. Challenges in blended learning.

Challenge	Mean	SD
Internet	3.95	0.80
Interaction	3.70	0.85
Technical issues	3.60	0.88

Despite the generally positive perception of blended learning, several limitations were identified. Among these, problems related to internet connectivity were reported as the most significant, followed by issues in interaction and various technical difficulties. These findings suggest that although blended learning offers clear advantages, certain constraints continue to influence its effective implementation. Differences in responses indicate that students' experiences vary depending on their access to technological resources and learning environments. In particular, inadequate infrastructure—especially unreliable internet access—remains a major concern. These results are consistent with earlier studies that have highlighted both technical and contextual barriers in blended learning settings (Mulyono et al., 2021; Gayatri et al., 2023). Similar issues related to digital accessibility and learner readiness have also been documented in previous research (Menggo & Darong, 2022; Gayatri et al., 2022).

Overall Effectiveness

Table 6. Overall effectiveness.

Variable	Mean	SD
Performance	4.15	0.67
Satisfaction	4.22	0.64

The findings indicate that blended learning is highly effective in enhancing both academic performance and student satisfaction. The relatively high mean scores for these variables suggest that learners not only achieve improved academic results but also experience greater satisfaction in their learning process. The low variability in responses reflects a consistent perception among participants, indicating that these positive outcomes are broadly shared. These results highlight the effectiveness of combining appropriate pedagogical approaches with technological tools to improve learning outcomes. Such findings are supported by earlier studies, which have shown that blended learning contributes to better academic performance, increased motivation, and overall instructional effectiveness (Menggo & Darong, 2022; Gayatri et al., 2023; Mulyono et al., 2021; Gayatri et al., 2022).

Conclusion

The findings of this study demonstrate that blended learning is an effective instructional approach in Indonesian EFL classrooms, contributing to positive student perceptions, increased engagement, and measurable improvements in language proficiency. Students benefit from the flexibility, accessibility, and interactive features provided by technology-supported learning environments. Although certain challenges related to technical issues and internet connectivity were identified, these limitations are relatively moderate and do not substantially hinder learning outcomes. Overall, the integration of blended learning enhances both academic achievement and learner satisfaction.

Recommendations

- 1) To strengthen blended learning implementation, institutions should improve technological infrastructure and provide continuous training for educators in using digital tools effectively.
- 2) Incorporating more interactive activities can further enhance student engagement, while additional focus on speaking practice is recommended.

Declarations

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Artificial Intelligence (AI) Use Statement: Artificial intelligence tools were not utilized in conducting data analysis, interpreting results, or generating scientific conclusions.

Author Contribution: The author solely carried out all aspects of the research process, including conceptualization, methodology design, data gathering, statistical evaluation, interpretation, and manuscript writing.

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Research Content: The author affirms that this work is original, has not been published elsewhere, and is not currently being considered by any other journal or publication.

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