IMPACTS OF BLENDED LEARNING ON STUDENTS' ENGLISH LEARNING MOTIVATION, AUTONOMY, AND DIGITAL LITERACY IN A RURAL HIGH SCHOOL, AN GIANG PROVINCE

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Abstract

The present study explores the impact of blended learning on English language motivation, learner autonomy, and digital literacy via students' evaluation. This study employed mixed-methods design. Accordingly, quantitative data was obtained via a 5-point scale questionnaire surveying 132 students from a rural high school in An Giang province. This high school has implemented blended learning over the past three school years. Of these 132 students, 20 students were randomly selected to take part in semi-structure interviews for qualitative data. The obtained results indicate that blended learning promoted students' English language motivation, increased learner autonomy, and enhanced the development of digital literacy skills. However, students also reported encountering certain significant challenges associated with blended learning, particularly related to infrastructure and digital learning capacity. Thereby, the results underscore the positive impact of blended learning on English education in rural high schools, provided that adequate digital support and investment in infrastructure. Also, teacher guidance should be constant and sufficient, especially for students who are struggling or lack digital literacy.

Keywords: *Blended learning, digital literacy, English as a foreign language (EFL), learner autonomy, learning motivation.*

TÁC ĐỘNG CỦA HỌC TẬP KẾT HỢP LÊN ĐỘNG CƠ HỌC TIẾNG ANH, VIỆC TỰ HỌC VÀ NĂNG LỰC SỐ CỦA HỌC SINH Ở MỘT TRƯỜNG TRUNG HỌC PHỔ THÔNG VÙNG NÔNG THÔN, TỈNH AN GIANG

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Tóm tắt

Nghiên cứu này khảo sát tác động của việc học tập kết hợp lên động lực học tiếng Anh, tính tự chủ của người học, và khả năng sử dụng công nghệ số thông qua đánh giá của học sinh. Nghiên cứu sử dụng thiết kế phương pháp hỗn hợp. Theo đó, dữ liệu định lượng được thu thập thông qua bảng câu hỏi thang điểm 5, khảo sát 132 học sinh từ một trường trung học phổ thông ở vùng nông thôn tại tỉnh An Giang. Trường trung học phổ thông này đã triển khai hình thức học tập kết hợp trong ba năm học vừa qua. Trong số 132 học sinh này, 20 học sinh được chọn để tham gia phỏng vấn trực tiếp nhằm thu thập dữ liệu định tính. Kết quả cho thấy hình thức học tập kết hợp đã thúc đẩy động lực học tiếng Anh của học sinh, tăng tính tự chủ của người học và nâng cao sự phát triển các kỹ năng sử dụng công nghệ số. Tuy nhiên, học sinh cũng cho biết gặp phải một số thách thức đáng kể liên quan đến hình thức học tập kết hợp, đặc biệt là liên quan đến cơ sở hạ tầng và năng lực học tập số. Kết quả thu được nhấn mạnh tác động tích cực của hình thức học kết hợp đối với giáo dục tiếng Anh ở các trường trung học phổ thông ở vùng nông thôn, với điều kiện là có sự hỗ trợ kỹ thuật số và đầu tư đầy đủ vào cơ sở hạ tầng. Ngoài ra, giáo viên cần hướng dẫn thường xuyên và đầy đủ, đặc biệt là đối với những học sinh đang gặp khó khăn hoặc chưa thành thạo năng lực sử dụng công nghệ số.

Từ khóa: Động cơ học tập, học tập kết hợp, năng lực số, tiếng Anh như một ngoại ngữ, tính tự chủ người học.

1. Introduction

Blended learning (BL) is the result of the continuous advancement of technology and the experiences gained during the COVID-19 pandemic in global educational settings (Bozkurt & Sharma, 2020; Syarifudin et al., 2024**)**. In Vietnam, the digital transformation policy in education has particularly encouraged many schools and universities to integrate technology into teaching and learning, especially in the post-COVID-19 period (MOET, 2020), including the instruction of English as a foreign language (EFL). Over the past years, BL has been adopted as alternative instructional ways to positively impact learner motivation, autonomy, and academic performance at high schools (Nguyen et al., 2022; Tran & Le, 2021) and tertiary education (Bui & Bui, 2023; Tran, 2023; Tran, 2024). However, in rural Vietnamese high schools, research on the impact of the BL approach on EFL education remains limited due to constraints in teaching and learning resources, uneven levels of learner autonomy, and insufficient school infrastructure (Hoang, 2015). Therefore, the present study is conducted to address this gap. It aims to investigate students' perception of the impact of BL on their English learning, including motivation, autonomy, and digital literacy. These students come from a rural high school in An Giang province. Accordingly, this study raised a primary question: *How do students perceive the impact of blended learning on their English learning motivation, autonomy, and digital literacy?* The findings would provide more insight into the current state of BL implementation in English education among rural high schools in Vietnam; thereby, pedagogical recommendations are offered for better outcome on this instructional approach.

2. Literature review

2.1. Conceptual framework

2.1.1. Blended learning in language education

Blended learning combines traditional in-person instruction with online learning components to provide a flexible and effective educational framework (Graham, 2013). It is generally defined as the strategic integration of direct teaching (face-to-face/F2F) and digital methods to enhance learning outcomes and support personalized learning experiences (Jeffrey et al., 2014). It should be noted that BL is not confined to a single format; its implementation differs depending on subjects, instructors, training programs, educational levels, and institutions. Hannon and Macken (2014) divide BL into three models: (1) Blended presentation–interaction, containing F2F classes for lesson presentation and learning interaction, which is added with online tasks behind the classroom; (2) Blended block: instructional activities are shaped by sequential blocks of F2F and online format; and (3) Fully online model considered blended with both synchronous (happening at the same time) and asynchronous (not happening at the same time) formats.

It has been observed that BL can help: (i) foster comprehensive language skills, including listening, speaking, reading, and writing, through a combination of F2F and online instruction using digital tools (Graham, 2013); (ii) improve communication skills in authentic contexts, allowing learners to apply English in both daily and academic interactions (Richards, 2006); (iii) encourage learner autonomy, including self-directed progress tracking and proactive use of online resources (Syarifudin et al., 2024); and (iv) stimulate learning motivation (Gouëdard & Viennet, 2020). However, several obstacles in BL classes have been reported (Farrell & Brunton, 2020; Xavier & Meneses, 2022). They include insufficient technological bases (especially in rural areas), a reduction in useful teacher-learner interactions, learners somehow feeling isolated or distracted from learning, and increased

dependence on digital tools. Thus, it is advisable that teachers and educators attend closely to these limitations for optimal benefits of BL.

2.1.2. Learning motivation

In the context of second language acquisition, learning motivation (LM) refers to learners' effort and commitment to language learning, which is combined with their satisfaction obtained from the learning process (Gardner, 1985). Meanwhile, Oxford and Shearin (1994) stressed that LM is an important element that drives active and personalized engagement in EFL. Learning motivation is typically classified into two types, namely (i) intrinsic motivation, driven by curiosity and personal interest, and (ii) extrinsic motivation, guided by external rewards and conditions (Ryan & Deci, 2000). LM determines how learners choose learning tasks, how much effort they invest, and how persistently they study, all of which directly affect their language learning (Dörnyei, 2001).

With online learning activities integrated, BL creates an environment for LM to be gradually fostered. BL supports intrinsic motivation through self-directed study, interactive tasks, self-paced and personalized learning, while reinforcing extrinsic motivation through structured guidance, diverse engaging online tasks, timely feedback, and digital incentives (Graham, 2013; Jeffrey et. al., 2014; Dörnyei, 2001). Therefore, BL not only facilitates the acquisition of language skills but also serves as a mechanism to strengthen LM, helping learners maintain active engagement, sustained effort, and long-term commitment in EFL learning.

2.1.3. Learner autonomy

Learner autonomy (LA) in BL is learners' capacity to actively manage and regulate their own learning process, which encompasses the ability to set goals, select learning strategies, monitor the learning progression, and evaluate outcomes based on the set goals. According to Holec (1981), LA is the ability to take charge of one's learning and can be developed through pedagogy (i.e., it is learnable over hands-on practice). Little (2007) and Benson (2011) emphasize that autonomy is not synonymous with isolated learning but is fostered through collaborative interaction with teachers and peers. In BL environment, a greater chance for personalized and self-paced learning via the online space promotes learners' self-regulation (Chen, 2022; Syarifudin et al., 2024). This is mostly because BL requires learners' self-regulation in technology-mediated tasks, thereby enabling them to take more responsibility for their language learning while engaging in interactive, technology-rich learning environments. In this line, Nguyen and Habók (2021) point out that LA in BL environment reflects both attitudinal and behavioral aspects, where learners adapt strategies and exercise decision-making supported by digital tools.

2.1.4. Digital literacy

According to Gilster (1997), digital literacy (DL) is the ability to know how to approach, analyze, and use information from various digital sources (especially the internet), which also involves critical thinking in managing and organizing online content. Eshet (2004) expanded this concept by presenting a multidimensional framework that includes photo-visual reproduction and socio-emotional literacies, which represent the complex survival skills necessary in the digital era. Similarly, Bawden (2008) shows that DL is not only the technical abilities to search and interpret information but also the cognitive and social aspects of participating in digitalized interactions. Meanwhile, Ng (2012) integrated these perspectives and defined DL as a combination of technical, cognitive, and socio-emotional skills that enable students to learn and engage effectively in technology-rich contexts. Taken together, these perspectives indicate that DL is not merely a set of operational skills but a holistic competence

integrating critical thinking, creativity, and responsible engagement with digital technologies and spaces. Thus, DL is an inherent catalyst for the success of BL, especially in EFL education.

2.2. Previous studies

A growing body of evidence has shown that BL has a significant impact on foreign language learners. For instance, Le and Tran (2023) studied 90 high school students and found that incorporating online activities into reading lessons not only maintained engagement, motivation but also encouraged proactive participation. Similarly, employing questionnaires and semi-structured interviews, Nguyen et al. (2022) showed the positive impact of BL on the reading comprehension skills of a group of 12th-grade students in a high school in An Giang province, as well as their favorable responses to learning in the BL environment. Meanwhile, Nguyen (2024) reported that high school students engaged in BL significantly improved their learning motivation and achievement. Also, Fadila and Anastasia (2024) reported that BL generated greater interest and sustained motivation compared to traditional learning in a study with 80 Indonesian high school students during alternating online and offline English learning phases. However, the authors showed some drawbacks students often struggle relating to the distraction in online contexts and self-regulation.

Regarding the impact of BL on LA, a study by Mrajca and Polok (2021) involving secondary school students in Poland found that BL activities such as flipped classrooms, group projects, and WebQuests help students develop self-directed learning skills, regulate their own learning processes, and take greater responsibility for their learning. From a broader perspective via BL, Ritella and Loperfido (2021) also found that LA not only involves decision-making regarding content and learning strategies but also includes the ability to self-regulate both cognitive and social aspects of the learning environment. Similarly, Syarifudin et al. (2024) demonstrated that BL combined with online learning skills significantly affects students' learning independence in senior high schools in Indonesia. However, Cao et al. (2024) cautioned that promoting autonomy in BL requires careful planning, support, and appropriate guidance from teachers; without these, students may struggle to fully take advantage of the flexibility offered by BL.

For digital learning (DL), Miller (2021) found that BL not only improved high school students' digital skills but also boosted their learning motivation through online collaborative tools. In line with this, Ashraf et al. (2022) highlighted the importance of course design, learning materials, and instructional strategies in fostering digital competence in BL. Their findings suggested that BL encouraged learners to use digital tools more effectively although disparities in internet and device access remained somehow problematic. Interviewing five secondary school EFL teachers, the study by Rahman et al. (2023) underlined students' DL cultivated, where they had to search for references related to topics to be discussed. Erol (2025) concluded that BL enhanced awareness of online safety and the ability to apply digital tools in a study on a BL-based digital citizenship program for primary school students in Turkey. However, the study emphasized that younger learners required continuous support from teachers and parents.

Overall, these studies demonstrate that BL positively impacts multiple dimensions of learning, including English learning performance, learner autonomy (LA), learning motivation (LM), and digital literacy (DL). Nonetheless, most research has been conducted in urban or higher-education contexts, where students had relatively favorable access to technology. Thus, the presence of these three variables (LA, LM, and DL) should be further studied in rural high schools, where BL applied in English education is mostly at its initial stage in the Vietnamese context.

3. Methods

3.1. Research design and participants

Based on the research question raised above (*How do students evaluate the impacts of blended learning on their English learning motivation, autonomy, and digital literacy?*), the present study adopted mixed-methods design to fully catch students' evaluation of BL impacts on English learning motivation, autonomy, and digital skills by triangulating quantitative and qualitative data collected (Creswell & Creswell, 2017). Accordingly, quantitative data were first collected using a questionnaire (completed by 132 participants). A questionnaire was used because it could collect data from a large sample and use statistical elements to find out specific trends or patterns of evaluation from the target population (ibid). In this case, participants provided an informed evaluation on the BL impacts, which they had already experienced. For qualitative data, semi-structured interviews were conducted with 20 participants randomly selected from the same population to provide more insight and clarifying patterns identified from the questionnaire results.

All participants were full-time students, aged 16–18, who enrolled in grades 10 and 11 at a rural high school, An Giang province, during the 2024–2025 academic year. This sampling was chosen based on four criteria: (i) being accessible for the researcher (who was working as an EFL teacher at this high school), (ii) full consent offered by the school authorities, (iii) students' willingness to take part in the study, and (iv) BL model applied at this school over the past three school years as seen in Table 1 below:

Table 1. The BL model applied

Lesson stages	In-person sessions	Online sessions
Warmer	Teacher introduces the lesson theme, elicits prior knowledge, and engages students with short games or brainstorming.	Conducted via Google Meet: Teacher uses slides or interactive tools like Mentimeter, Padlets, and Wordwall shown on Google Meet to activate students' background knowledge. Students respond via chat/mic.
Presentation	Teacher presents new vocabulary, grammar points, or language functions with examples. Students take notes and answer guided questions.	Conducted online in scheduled periods: Teacher shares handouts, slides, or short videos online. Students complete matching/ gap-fill tasks on Google Docs, Google Forms, or sending their answers via Chatbox on Google Meet.
Practice	Students practice English skills of listening, speaking, reading or writing in pairs/groups under the teacher's observation and support in need.	Students complete digital English worksheets, online quizzes, or collaborative tasks in breakout rooms. Teacher gives real-time support via chat/screen-sharing.
Production	Students perform English tasks such as minor role-plays, discussions, oral presentations, or short writing.	Students create digital English outputs in the forms of slides or short videos and share them on the class website. Then, relevant comments and feedback from teachers and peers are involved.

Lesson stages	In-person sessions	Online sessions
Wrap-up	Teacher addresses main strengths, and can-improve points, followed by checking students' understanding with a paper mini-quiz or reflection.	Key lesson concepts and items in English are posted online; students perform knowledge-reviewed exercises.

This model matches the Blended presentation–interaction, which contains F2F classes for lesson presentation and learning interaction, followed by online tasks behind the classroom (Hannon & Macken, 2014). Accordingly, the in-person sessions of the presentation-interaction cover all the essential sections of each lesson stage while the online sessions serve as extended learning activities. Upon the school authorities' approval, English subject leader at An Phu high school must schedule in detail this teaching model subject to the school regulations and norms over the entire school year. Furthermore, for outcome learning assessment, students must do English tasks both in-person and online. English speaking skills are specifically assessed through oral presentations, role-plays, and group discussions, while English written tasks are evaluated for accuracy and completeness. The in-charge teacher (i.e., who teaches the class) must take care of all these tasks, including instructional activities and outcome assessment.

3.2. Data collection and analysis

3.2.1. Questionnaire

Based on the previous research and the research question of the present study, a 5-point scale questionnaire was designed by the researcher. It comprised 30 items covering three domains (as seen in Table 2): English learning motivation (11 items), learner autonomy (13 items), and digital literacy (6 items). Each item was attached with five options (Strongly disagree, Disagree, No idea, Agree, and Strongly agree, respectively) for the respondent to choose from.

Table 2. Item distribution

No	Domains	Items	Adapted from
1	English learning motivation	1-11	Nguyen (2022); Nguyen (2024)
2	Learner autonomy	12-24	Chen (2022); Phan (2024)
3	Digital literacy	25-30	Miller (2021); Ashraf et al. (2022)

To obtain its content validity and reliability, the initial questionnaire version was reviewed by two experienced EFL teachers; then, it was piloted among 50 students from the target population. After that, some minor modifications on wording and item ordering were done before the final version was used in the main study.

To maximize participation, the questionnaire was distributed in both digital (Google Forms) and paper formats, each for one week. In both formats, participants were informed in detail about the objectives of the questionnaire survey, their rights to withdraw from the survey, and the confidentiality of all responses used in the later stages of analysis and interpretation.

Statistical analysis used IBM SPSS Version 26 to measure the Cronbach's Alpha of the target domains, Mean (M), Standard Deviation (SD) of each item in each domain. Data

visualization with tables (for numerical values) displayed validity and trends in participants' evaluation under discussion (Hair et al., 2019).

3.2.2. Semi-structured interviews

Semi-structured interviews were conducted with 20 randomly selected students (based on their willingness to take part in the interview) from the total sample of 132 to gain deeper insights into the impact of BL in EFL education via participants' evaluation under discussion. Accordingly, five primary questions were posed in the interview, respectively:

(1) How do you evaluate the impact of blended learning on your English learning motivation?

(2) How do you evaluate the impact of blended learning on your autonomy?

(3) How do you evaluate the impact of blended learning on your digital literacy?

(4) Did you encounter any challenges on blended learning?

(5) Do you have any recommendations for this learning?

The researcher contacted 20 random students among those who had completed the questionnaire and informed them about the purpose and format of the interview. They were also informed that the interview was optional. Then, upon the students' consent to participate, all the interviews were carried out F2F in a quiet and private environment so that students felt comfortable and open to speaking out their relevant reflections and comments. With the students' consent, all 20 interviews were audio-recorded. After that, the recordings were transcribed verbatim for subsequent analysis. Under ethical considerations in research, all personal information (i.e., real names, ages, and genders) was anonymized.

The coding was manipulated by the researcher. Then, the results were double-checked by two other EFL colleagues. The coding steps (Creswell & Creswell, 2017) were applied via (i) examining the data on case-by-case and labelling items based on five major themes: LM, LA, DL, challenges, and recommendations (ii) relationships among the major themes were identified, (iii) interpretations and quotations were written about themes, respectively.

4. Results and discussion

4.1. Quantitative results from the questionnaire

4.1.1. English learning motivation

As addressed above, the 30 questionnaire items were grouped into three domains of (1) English learning motivation, (2) Learner autonomy, and (3) Digital literacy. The next sections present the results in detail on these three domains, respectively. All the three domains gain Cronbach's Alpha reliability above 0.70, a baseline level, and all SD (Standard Deviation) values are between .90 and 1.05 (see Table 3, 4, and 5), indicating the reliable variance of the questionnaire scale (Hair et al., 2019).

Table 3. Impact of BL on English Learning Motivation

Items	Contents	M	SD
1	Blended learning motivated me in English learning	4.16	0.94
2	Blended learning helps me better comprehend English lessons	4.12	1.04
3	Blended learning improved my English learning performance	3.95	1.01
4	Blended learning motivated my creative use of English in learning activities	4.02	0.99
5	I am ready to take on learning assignments in blended learning	3.86	0.92

Items	Contents	M	SD
6	I am motivated to practice teacher-assigned tasks on blended learning	4.00	0.91
7	Blended learning motivates me to complete extra work outside of the classroom	3.86	1.01
8	I am motivated to practice my English communication skills on blended learning.	3.98	1.03
9	I feel more confident when joining a blended learning activity	3.88	.95
10	I am motivated to raise questions and connect to my teachers and classmates on blended learning	3.98	.98
11	I am motivated to come to class to join more useful discussions and to practice what I have learned	4.07	.95

Note. M=mean; SD=standard deviation.

Table 3 presents students' evaluation of the impact of BL on their English learning motivation. Overall, students reported positive attitudes, with mean scores ranging from 3.86 to 4.16 (out of 5), all above the average level. The highest mean score was observed for Item 1 ("Blended learning motivated me in English learning" (M=4.16, SD=0.94), followed by Item 2 (M=4.12, SD=1.04), suggesting that students recognized that BL enhanced their English learning. Similarly, Item 10 (M=3.98, SD=0.98) highlighted the increased motivation to raise questions, connect with teachers and classmates. Motivation was also activated sufficiently as students were ready to join useful discussions in class (Item 11, M=4.07, SD=0.95). Meanwhile, Items 5 and 7 received the lowest mean values (both M=3.86), indicating that students were somewhat less confident about managing their own study time and engaging in extra learning tasks outside the classroom. Nevertheless, the scores still reflect relatively positive evaluations. Other items, such as opportunities to enhance creativity in language use (Item 4, M=4.02), to practice teacher-assigned tasks (Item 6, M=4.00), and to practice communication skills (Item 8, M=3.98), also received positive ratings.

Table 4. Impact of BL on Learner Autonomy

Items	Contents	M	SD
12	My reliance on teachers has decreased based on blended learning	3.47	1.14
13	I can continue learning English independently at home through interactive language games and quizzes	3.91	0.96
14	I can learn English at my own pace through blended learning	3.83	0.98
15	I can learn English beyond the classroom	3.98	0.96
16	I can use a variety of learning materials provided by teachers to study English independently	3.98	1.00
17	I can find various kinds of English learning resources available on the Internet to apply in my in-class learning	4.08	0.95
18	I can learn English beyond what is taught in class and share with peers via online social networking platforms	3.90	1.03
19	I can learn independently based on my own needs and gradually improve autonomous English learning behaviors	4.02	1.04
20	I can review my English lesson content saved online by the teacher whenever I encounter difficulties or need reinforcement	4.01	1.05
21	I can review the knowledge learned in class through online learning games and quizzes	4.06	1.01

Items	Contents	M	SD
22	I can actively arrange my English study time during blended learning activities	3.96	0.96
23	Blended learning allows me time to work on more difficult English exercises or tasks independently	3.98	0.97
24	I actively participate in online learning activities without being reminded	3.94	1.03

As seen in Table 3, mean values ranged from 3.47 to 4.08, suggesting that students generally viewed BL as supportive of LA. Item 17 gained the highest (M=4.08, SD=0.95), indicating that students valued the ability to search for and apply diverse online learning resources. Other highly rated items included Item 19, 20, and 21. By contrast, Item 12 received the lowest mean score (M=3.47) with a largest SD (=1.14), suggesting that although BL reduced reliance on teachers to some extent, many students still perceived themselves as dependent on teacher guidance. Also, items related to pace learning control (Item 14), and online learning independently (Item 13, 18, 24) indicated moderate but positive evaluations among the students. Taken together, these results suggest that BL contribute positively to fostering LA by encouraging independent resource uses and active review practices, though challenges remain in reducing students' dependence on teachers.

4.1.3. Digital literacy

Table 5. Impact of BL on Digital Literacy

Item	Content	M	SD
25	My friends and I can work together on project teams using social media and multimedia resources, including video and chatrooms	3.96	.98
26	My English learning in particular is more successful thanks to blended learning and e-learning, which include multiple forms of media such as print, audio, video, and animation	4.02	.92
27	My teachers' online tests, quizzes, and feedback are simple for me to access	4.00	.98
28	Blended learning boosts my improvement in digital literacy skills	4.08	.90
29	I know how to effectively use Internet resources to support both online and face-to-face learning	4.02	1.04
30	I discovered many interesting learning support websites and I can better apply them to my classroom English learning	3.99	1.01

Table 5 presents the impact of BL on students' DL skills. Mean scores ranged from 3.96 to 4.08, suggesting consistently positive evaluation on BL's contribution to DL development. The highest-evaluated item was Item 28 (M=4.08), highlighting the significant role of BL in facilitating DL development. Positive evaluation was also indicated by Item 26 (M=4.02), 27 (M=4.00), and 29 (M=4.02). Although Item 25 (M=3.96) received the lowest score, it still indicated that BL supports collaborative teamwork using social media and multimedia tools. Overall, these results demonstrate that BL strengthens students' digital literacy by improving their capacity to access, evaluate, and interact socially on digital resources extensively and confidently.

4.2. Qualitative results from interviews

4.2.1. English learning motivation

Most interviewed students (16 out of 20) reported that their English learning motivation was enhanced through blended learning. Many students generally perceived that the combination of online and face-to-face instruction made English learning more enjoyable, flexible, and interactive. For example, student 1 (S1) observed that "*Blended learning is more interesting than traditional classroom lessons because it combines different ways of learning and keeps me more engaged.*" Similarly, S8 noted that "*Blended learning increased my motivation and performance by giving me access to a wide range of learning materials and interesting online activities that kept me engaged in learning English.*" Like S8, S9 also reported that "*Blended learning is the ideal way to study English because it allows me to develop all my language skills while keeping the lessons flexible and interactive.*"

Seven over 20 students showed that their motivation was fostered and encouraged when studying in BL. For instance, S3 reported that she found learning English more interesting with blended learning lessons. She enjoyed herself reviewing lessons actively and participating in online games for better learning new English vocabulary. Similarly, S5 expressed that blended learning made his study more regular and enjoyable because he could review the lessons at anytime, work with the classmates in class, and continue self-learning at home. Thereby, it motivated him to engage more in English learning activities. S12 acknowledged that blended learning had changed the way she learned English: "*I can review lessons repeatedly and still interact with my teacher and classmates in class, which keeps me motivated, especially in improving my listening and reading skills.*"

4.2.2. Learner autonomy

From the interview, more than half of the participants (12 out of 20) confirmed that BL enabled them to become more independent in managing their study pace, reviewing lessons, and taking greater control over their own learning. As S9 remarked, "*Blended learning allows me to manage my learning, review lessons on my own, and develop all my language skills.*" Similarly, S12 shared that "*I feel more confident planning my study schedule and choosing what to practice, which helps me learn English more effectively.*" Several other students (6 out of 20) also emphasized how BL fostered a sense of self-regulated learning. For instance, S10 commented that "*Blended learning saves time and encourages self-learning. I can review lessons online and ask my teachers questions via Zalo, which is very convenient and suitable for English learning.*"

Likewise, S17 noted that the approach was "*flexible and not boring; I can review lessons through videos or materials whenever something is unclear, which helps me learn more effectively as it combines direct and self-study.*" Sharing the idea with S17, S4 expressed that "*Blended learning helps me manage my study time better and learn proactively at my own pace, which reduces learning pressure.*" Besides, S20 reported that "*This method is very effective because I can interact directly in class and then practice at home through listening and online exercises, and I can clearly see my progress.*"

4.2.3. Digital literacy

For DL impact, 14/20 students revealed that they improved their digital-based skills for English learning through BL. S5 commented that "*Flexible timing and abundant materials make students more active and interested in learning.*" Similarly, S18 stated that "*Blended learning is very flexible and effective. I can control my learning speed and access various resources such as quizzes, videos, and discussion forums, which is ideal for learning English.*"

In addition, several students (5 out of 20) described how BL helped them improve their ability to use digital tools for different English skills. S16 explained that "*This approach is suitable for me because it allows me to practice diverse English skills—using online lessons for listening and speaking, and in-class sessions for pronunciation and writing correction.*" Likewise, S10 recognized learners' digital literacy was boosted by saying "*I enjoyed the variety of online and offline activities such as Quizizz and group work, which helped me become more confident in using technology and improved all of my English skills.*" In addition, S14 also shared that "*Before blended learning, I rarely used online tools for studying. Now I can easily access digital platforms, download materials, and submit assignments online, which makes learning English more convenient and effective.*"

4.2.4. Challenges and recommendations

Regarding challenges, some students pointed out several drawbacks caused by technical and personal factors. S9 reported the challenge by sharing that *"I have difficulties with devices, weak Internet, and confusion caused by the use of multiple platforms"*. Sharing the same view, S1 revealed that the most challenges of BL resulted from weak, unstable Internet connection and easy distraction from learning because he did not have a well-equipped learning room at home. Furthermore, S16 disclosed, "*Because my home is far from school, the Internet link is not always stable. Thus, many times I missed the teacher's lesson explanations and feedback. It was sometimes difficult for me to connect my classmates for learning group activities.*" These challenges were shared by S10 and S15. One student noted that "*I felt really frustrated whenever the digital connection was not strong enough for me to fulfill online learning assignments on time*" (S18).

As a result, the students offered relevant recommendations. For example, S10 suggested that *"The school should standardize the platforms. Teachers should provide clear instructions orally and in written formats. Timetables should be specific and flexible, informing students beforehand"*. At the same time, some students underscored the importance of balancing online and face-to-face modes. As S17 remarked, online learning made her lesson revisions easier, but teachers should provide detailed guidance in the classroom.

4.3. Discussion

Firstly, the results of the study show students' positive evaluations of the impact of BL on English LM. This is largely because students were provided with various new and engaging learning activities, as well as English input from multiple sources beyond the traditional classroom, which had previously been limited in terms of learning resources and activities. Under the BL model, they were able to use different learning materials provided by teachers and access additional resources through digital platforms on their own. They also had opportunities to digitally interact with teachers and classmates for English-related activities with ease. As a result, they were extensively exposed to English-rich environments that supported their learning—an essential factor for sustained EFL engagement, commitment, and long-term achievement (Dörnyei, 2001; Gardner, 1985; Oxford & Shearin, 1994). In other words, the results suggest that BL was positively evaluated by students for its ability to enhance English learning motivation, as demonstrated through their increased engagement in English learning activities. This finding aligns with the previous investigations by Nguyen et al. (2022), Le and Tran (2023), Nguyen (2024), and Fadila and Anastasia (2024), which demonstrated that BL enhanced learning motivation, engagement, and academic performance among high school students.

Secondly, as seen in Table 4 and interview results, the findings of the present study also show that BL positively impacts LA. This is represented by the students' ability to manage

their learning time and self-pace learning activities. It indicates that the students were not only aware of their learning needs but also actively reviewed lessons and confidently interacted with peers and learning materials available online, especially via various English language games and quizzes. These findings are consistent with those studies by Mrajca and Polok (2021), Ritella and Loperfido (2021), and Syarifudin et al. (2024), who all agree that BL supports the development of LA and responsibility in the learning process. However, the present study also reveals that the students somehow relied on teachers when engaging in BL. Since they are all from a rural high school, where BL is at its initial stage, it is understandable that these students appeared to encounter some challenges related to technical problems and online participation for learning activities. This finding echoes Cao et al. (2024), who emphasize the crucial role of teachers' constructive guidance on BL environments.

Thirdly, drawing on the results presented above (Table 5 and the interview), the present study confirms that BL facilitates the development of students' digital literacy. Apparently, online learning activities embedded in BL (like those displayed in Table 1) provide many opportunities for students to use, refine, and develop their digital skills over the entire school year. This finding is consistent with the relevant results reported by Miller (2021) and Ashraf et al. (2022), which demonstrate that BL promotes students' digital literacy through the digital activities they engage in within BL environments. However, the present study maintains that students with limited digital literacy require step-by-step support from teachers. This result aligns with Erol (2025), who emphasizes the necessity of ongoing teacher support for students in BL settings.

5. Conclusion and recommendation

In summary, the results show the positive impact of applying BL to EFL education in rural high schools like An Phu high school. BL can promote English learning motivation, learner autonomy, and digital literacy for students. However, alongside the positive impact, some challenges of BL implementation in this study were identified. They include unstable Internet connection, limited access to digital learning devices, and various distractions that hinder students' concentration. Therefore, to maximize the benefits and minimize the drawbacks of integrating BL in every lesson, the following recommendation should be considered.

Firstly, for rural high school students, especially those still weak in LA and DL, teachers should provide frequent and intensive support. In addition, teachers should design more engaging English learning activities embedded with online language games and quizzes for students to individually and collaboratively perform because these will likely involve them in active learning. Moreover, collaborative learning through peer mentoring, group projects, and interactive online forms should be encouraged more frequently so that students may feel interested in English learning activities. Secondly, school authorities should attempt to improve technological infrastructure for the internet connection to be stable, reliable, and safe for every BL class. In addition, teachers should give students clear instructions and use standardized platforms in BL settings.

Although obtaining its aims, the present study contains limitations. With a small sample size (of only 132 students from a single high school) and participants' self-reported data, the relevant generalization from this study is limited. Therefore, future research should involve more students from several rural high schools rather than only one. Collected data should include the impact of BL on participants' English improvement exhibited by academic outcome in four basic skills of speaking, listening, reading, and writing.

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