Examining Students' Attitudes towards Blending e-Learning in English Courses and Effect of e-Learning on Students' Success in English Learning: A Case Study at Rajamangala University of Technology Lanna (RMUTL)

Rungkan Leelasopawut (iD)

College of Integrated Science and Technology, Rajamangala University of Technology Lanna, Thailand, *rungkan@rmutl.ac.th*

*Corresponding author E-mail: rungkan@rmutl.ac.th

Please cite as: Leelasopawut, R. (2026).Examining students' attitudes towards blending e-Learning in English courses and effect of e-Learning on students' success in English learning: A case study at Rajamangala University of Technology Lanna (RMUTL). *International Journal of Educational Communications and Technology, 6*(1), 1-30.

ABSTRACT: *This research aims to develop performance indicators for English language teachers based on digital age learning Improving students' English proficiency remains a major concern in education, as limited communication skills in English can restrict university graduates' opportunities for employment and career advancement. To address this issue, e-Learning has been introduced as a supplementary tool to support English language teaching and learning at RMUTL alongside traditional classroom instruction. This study explores students' attitudes toward e-Learning using a qualitative approach, with semi-structured interviews as the primary research instrument. Forty participants consisting of male and female students 17 to 25 years of age, enrolled in pre-university and undergraduate engineering programs. The interview data was analyzed using Thematic Analysis (TA) to identify the students' perceptions of the advantages and barriers of e-learning, as well as their recommendations for improving its use in the context of EFL teaching and learning at RMUTL.*

The findings revealed that RMUTL students had perceived several significant benefits of blended learning in their English courses, including comprehensive language skill development, increased learner autonomy, and enhanced confidence. However, students also faced notable challenges, such as technical issues, heavy workloads, and limited interaction, which can hinder their learning experience. To improve blended EFL learning, institutions should ensure reliable technology, such as stable internet and up-to-date devices, and should implement fair assessments, such as speaking tasks and peer feedback. They should foster collaboration through group projects and support self-regulated learning with tools like study planners. Inclusive access should be provided through device loans, subsidized internet, or on-campus study spaces. Finally, ongoing training of educators and regular collection of student feedback can further enhance learning outcomes.

Keywords: e-learning, Blended e-learning, Online course, Educational Technology, Language learning and Technology

1. Introduction

The integration of technology in education has transformed traditional teaching approaches and has given rise to e-Learning as a dynamic pedagogy for 21st century learners (Gaffas, 2023). e-Learning offers flexible access to knowledge and opportunities for active, learner-centered engagement when combined with face-to-face instruction in a blended learning format. This aligns with constructivist learning theory, which places emphasis on learners constructing knowledge through meaningful experiences, collaboration, and reflection (Bada & Olusegun, 2015).

At Rajamangala University of Technology Lanna (RMUTL), blended learning has been recently introduced in English courses to enhance our students' language skills. Students complete an online component alongside face-to-face

classes, managing their learning schedules independently. While blended learning has been widely studied in general higher education contexts, research that focuses on technical universities in Thailand, particularly on EFL courses, remains limited. Existing studies, which have largely examined traditional university settings, have fallen short when attempting to better understand the students' experiences, the barriers to the perceived benefits, and the practical recommendations for Thai technical institutions.

Based on a constructivist perspective, this study explored how students can actively engage with blended learning, the challenges that they encounter, and their suggestions for improvement. To this end, a qualitative research approach was adopted to capture in-depth, detailed insights into students' experiences, perceptions, and attitudes, which cannot be fully understood through the use of quantitative measures alone. This approach allows participants to express their perspectives in their own words, providing rich, context-specific data that is essential for understanding the complexities of blended learning within the EFL context at RMUTL. This study addressed the following research questions:

2. Research Questions

This study aimed at finding answers to the following questions:

2.1 What are the advantages of blending learning in English Courses as perceived by RMUTL students?
2.2 What are the barriers to learning through blended learning in English courses as perceived by RMUTL students?
2.3 How can blended learning be used more effectively within the context of EFL teaching as perceived by RMUTL students?

3. Literature Review

3.1 e-Learning and Blended Learning
According to Nedeva & Dimova (2010), "e-Learning stands for education via the Internet, network, or standalone computer. e-Learning is essentially the network-enabled transfer of skills and knowledge. It refers to using electronic applications and processes to learn. These applications and processes include Web-based learning, computer-based learning, virtual classrooms, and digital collaboration. The content, to be studied, is delivered via the Internet, intranet/extranet, audio or video tape, satellite TV, and CD-ROM" (p. 2010). When implemented without any face-to-face instruction, this approach is referred to as a fully online or a fully e-Learning delivery mode (Gaffas, 2023).

Blended learning is commonly defined as an instructional approach that combines face-to-face classroom instruction with online learning components (Watanapokul, 2022; Yan et al., 2024). Similarly, Boichuk & Strutynska (2024) described it as a pedagogical method that integrates traditional classroom teaching with digital technologies and online resources. In the same vein, Whitelock & Jefts (2003) noted that blended learning merges conventional teaching methods with web-based approaches. Wahab (2024) further emphasized that blended learning enables instructors to deliver course content through both online platforms and in-person instruction, thereby offering flexibility and accessibility. This dual mode of delivery allows the students to engage with learning materials based on their individual needs, pace, and schedules (Boichuk & Strutynska, 2024).

In this study, blended learning refers to courses that integrate e-Learning with traditional face-to-face instruction to optimize the students' learning outcomes. Although previous research has presented mixed findings regarding its effectiveness, blended learning remains a widely adopted approach for enhancing educational experiences. Accordingly, this study explores the students' perceptions of the advantages and disadvantages of blended learning, as well as their recommendations for improving its implementation in the EFL teaching and learning context, specifically at RMUTL. The following section reviews the relevant literature, which focuses on the impact of blended learning within the EFL context.

3.2 Blended e-Learning in the EFL Context
In response to the limitations of online learning, blended learning has emerged as a long-term approach to enhance the quality of language education (Boichuk & Strutynska, 2024; Yudhana, 2021). Face-to-face instruction and online learning are combined as a means to teach a particular subject (Boichuk & Strutynska, 2024). Studies have claimed that blended learning benefits teachers and learners in the language learning context. Ramalingam et al. (2022) found that blended learning enhances flexibility, learner autonomy, engagement, and accessibility, while reducing both

financial and time-related constraints. Most importantly, the course materials are accessible at all times, allowing learners to take greater control of their own learning processes. This aligns with Meyers et al. (2024), who pointed out that blended learning provides increased learning opportunities by improving access to materials and enhancing the overall quality of learning. Similarly, Yang & Chano (2025) asserted that blended learning fosters an active and dynamic learning environment, while also promoting self-directed learning among students.

Based on the literature review, it is evident that research on the impacts of blended learning in language learning primarily focuses on two areas: 1) the attitudes of students and teachers toward the blended learning approach, and 2) the effectiveness of blended learning as measured through statistical analyses or user feedback. The following section provides an overview of studies, which examines the users' attitudes toward blended learning in EFL contexts and is followed by a review of research evaluating its effectiveness through achievement test results and statistical analyses.

Studies conducted on students' attitudes toward the use of blended learning in EFL teaching and learning have reported conflicting results. For instance, Meyers et al. (2024) investigated first-year English Additional Language students' attitudes toward blended learning methods in an academic writing course at a college in South Africa. The findings revealed that most of the students in their study had preferred face-to-face instruction over blended learning within their learning context. This preference was primarily due to the fact that blended learning tended to benefit those who could afford to purchase data. Consequently, they suggested that blended learning may contribute to educational inequality. In contrast, Hong & Stapa (2023) found that blended learning had enhanced primary pupils' vocabulary development and had increased learning motivation in an ESL classroom. Similarly, Kim et al. (2023) explored the perspectives of Thai university students and reported that e-Learning on the university's platform had been both useful and enjoyable. Their findings further revealed that the students' enjoyment of e-Learning had contributed to increased productivity and academic performance. This aligned with Watanapokakul (2022), who investigated the perceptions of students and teachers regarding blended learning within the Thai EFL context during the COVID-19 pandemic. Her study indicated that blended learning was appropriate and beneficial for undergraduate EFL classes, since it had supported social distancing measures, had improved students' English proficiency, had saved time and travel costs, and had offered flexibility in arranging learning and teaching environments.

A recent study, which was conducted in a university in the Philippines by Escandallo & Escandallo (2024), explored a multiple case study conducted with English major students' perspectives on blended learning. This study found that most students had experienced difficulties in learning English through a blended learning approach. The reported factors that had influenced their unforgettable learning experiences were primarily the following: 1) having poor internet connections, 2) struggling to answer the modules, 3) confronting the fear of making mistakes (answering incorrect answers), 4) encountering a lack of program assistance, 5) having a poor range of vocabulary, 6) experiencing a lack of practical learning applications, and 7) facing a lack of emotional support. Their study further pointed out that the experiences that students have during blended learning could be more desirable if it were accompanied by teacher support via effective scaffolding strategies, if there were good internet connections, and if the students' emotional needs were fulfilled. These findings aligned with the conclusions reported in a systematic review of blended e-Learning models by Alammary (2019). Similarly, Adarkwah (2021) identified challenges in Ghana's online education, such as limited access, poor infrastructure, high costs, and inadequate teacher training, and placed emphasis on the need for policies that could enhance equity and support.

Concerning the effectiveness of blended learning on the English proficiency of the students, Hussein Al Noursi (2021) conducted a study in the United Arab Emirates to examine its impact on the English language proficiency of twelfth-grade students as measured by their IELTS scores. The findings revealed a significant difference in achievement test results between the experimental and control groups. The study concluded that blended learning had likely been the key factor contributing to the higher English proficiency scores observed in the experimental group. However, the study also emphasized that the success of blended learning largely depends on each student's degree of responsibility and his/her commitment to active learning. A study by Hong & Stapa (2023) in Malaysia examined the effects of blended learning on the pupils' vocabulary development and motivation in an ESL classroom. The findings demonstrated that the pupils who had engaged in blended learning outperformed those in traditional learning settings in terms of vocabulary acquisition. However, this study noted that after the students had engaged a blended learning for longer periods, it did not seem to strengthen their learning of new words. Similarly, Sarajari & Gilakjani (2024) investigated the effects of online and blended learning on Iranian intermediate EFL learners' vocabulary learning. The study found that both online and blended learning approaches had been effective in developing EFL learners' vocabulary, showing a statistically significant impact on the vocabulary acquisition of Iranian intermediate EFL

learners. In line with findings from studies conducted in Thailand, Yudhana (2021) carried out quantitative research to examine the effects of blended learning on teaching reading skills to Thai undergraduate students. The results of the study demonstrated that the students' reading skills had significantly improved through the use of a blended learning approach in EFL instruction. Kantisa & Sitthitikul (2020) also found that using a blended learning approach with Thai university EFL learners had enhanced their English-speaking skills and had increased their learning motivation. This resonates with the findings of Wongwuttiwat et al. (2020), who examined learning achievements among university students in Thailand, who were taught through face-to-face instruction and blended learning. Their results showed that students in the blended learning group had outperformed those receiving only face-to-face instruction. Consequently, the study concluded that blended learning is more effective than traditional face-to-face teaching.

While blended learning offers several advantages for developing language skills, some studies have highlighted its drawbacks in language teaching contexts. For example, Gaffas (2023) found that students perceived online learning as lacking sufficient interaction both between students and instructors and among peers. Shelly et al. (2024) examined the effectiveness of blended learning using surveys and focus groups with 782 medical students. The study found that students had generally viewed blended learning positively, noting increased motivation, learning efficiency, and easier access to materials. However, they also reported challenges, such as heavy workloads, time management issues, and technical difficulties. These findings aligned with Garrison and Kanuka's (2004) view that the success of blended learning depends on intentional design, strong leadership, and alignment with educational goals. Rahmani et al. (2024) further found that factors, such as system quality, student preparedness, motivation, and the availability of support services including both technical and academic assistance, play a significant role in influencing dropout rates in online higher education. This aligned with Wang et al. (2021), who recommend that online course curricula, teaching materials, and the creation of interactive activities, be tailored to meet the students' needs in order to enhance the effectiveness of blended e-Learning models.

The literature review revealed conflicting results regarding the students' attitudes toward the effects of online and blended learning approaches in EFL teaching, indicating a need for further investigation. Therefore, the present study aimed at exploring the perspectives of students at RMUTL with regard to their experiences with learning that incorporated face-to-face instruction. It is anticipated that the findings will provide valuable insights to inform current policies promoting blended learning in EFL education. The following section outlines the study design, including the research tradition, the data collection methods and procedures, and the data analysis techniques that were employed to address the research questions outlined earlier.

4. Research Methodology

4.1 Theoretical Perspectives
This study, which explored the strengths, barriers, and recommendations to the use of e-Learning blended with face-to-face instructions in EFL teaching at RMUTL, pondered that the participants can determine their learning outcomes without having to rely on the teaching instructors to construct knowledge or get information. This study viewed that students play a key role in helping the researcher, teaching practitioners, and the educational policy makers to gain insight into the use of e-Learning or blended learning in EFL education, especially within the RMUTL context, as well as for further implementations in other contexts. Therefore, a constructivist lens was required in order to explore the multiple realities through interactions with the participants. As noted by Guba & Lincoln (1994), constructivists believe that realities are socially constructed, with meanings that are dependent upon the participants' interpretations. It is suggested that it is appropriate to uncover their realities inductively through interaction rather than to derive their realities from pre-existing theories. Therefore, it can be argued that this study is underpinned within a framework of constructivism.

4.2 Case Study as a Research Methodology
Since this study aimed at exploring reality based on the participants' experiences, a qualitative research approach was deemed to be the most appropriate for uncovering new knowledge. In line with this, the study sought to understand and interpret reality through interviews rather than relying on statistical data. To this end, an exploratory case study was adopted as the research method for the present study. According to Yin (2009), adopting a case study research context enables the researcher to gain more in-depth understandings of specific phenomena. This study aimed at investigating the RMUTL students' perspectives on the use of blended e-Learning in their EFL courses. Given this

objective, an exploratory case study approach was determined to be most appropriate, since it allows for the exploration of multiple realities that are grounded in the lived experiences of the participants.

As noted by Guba and Lincoln (1994), constructivists hold that realities are socially constructed, with meanings shaped by participants' interpretations. From this perspective, it is appropriate to explore individuals' realities inductively through interaction rather than relying on predetermined theoretical assumptions. Guided by this view, the present study is grounded in a constructivist framework. This orientation positioned students as active agents who construct their own understandings, which informed both the research design and data collection processes. Semi-structured focus group interviews were therefore employed to allow participants to express their experiences in their own terms, while the researcher encouraged open dialogue so that students could extend and refine ideas collaboratively. In the analysis stage, the constructivist stance directed the researcher to develop themes from participants' actual accounts instead of imposing pre-existing theories. Their perspectives were regarded as personal and shaped by their specific learning contexts, enabling the findings to be interpreted as shared meanings co-constructed between the researcher and the participants.

4.3 Participants and Sampling Technique

This study was conducted at the College of Integrated Science and Technology, RMUTL, Doi Saket Campus, in Northern Thailand. The participants were selected using purposive sampling in order to ensure that they had had direct experience with blended e-Learning in EFL courses. As Creswell (2013) explains, purposive sampling allows researchers to gather rich, detailed information from individuals, who are especially knowledgeable about the topic. In this study, students, who had actively participated in both online and face-to-face learning, were intentionally chosen to provide meaningful insights into the strengths, challenges, and potential improvements of blended learning. This approach enabled a deep, contextual understanding of the students' experiences rather than aiming for broad generalization.

Participant selection took place after the completion of their English courses in March 2024. Students from eight different academic majors were contacted via the Line application, where the study objectives were explained and their willingness to participate was confirmed. A total of 40 students of mixed genders and with an age range of 16 to 25 voluntarily agreed to take part. In order to provide both diverse and information-rich perspectives on blended EFL learning, these students were organized into eight focus groups (each consisting of five students), representing different majors and year levels. According to Hennink & Kaiser (2022), this sample size allowed for manageable group discussions and enabled the collection of detailed insights from students, who had actively engaged in both online and face-to-face learning. The interviews were scheduled according to the availability of both the participants and the researcher. Details of the participants are presented in the following table 1.

Table 1. The details of the study's participants

Focus Groups	Age Ranges	Genders	Courses
1. B.E. Modern Electric Vehicles (Year 1)	19-25 years	Mixed	English for Working Skills
2. B.E. Software Engineering (Year 1)	19-25 years	Mixed	Academic English
3. B.E. Automation (Year 1)	19-25 years	Mixed	Academic English
4. Pre-Mechanical Engineering (Year 3)	16-18 years	Mixed	English for Engineering
5. Pre-Civil Engineering (Year 3)	16-18 years	Mixed	English for Engineering
6. Pre-Electronics & Electric Engineering (Year 3)	16-18 years	Mixed	English for Engineering
7. Pre-Engineering (Year 1) (EP)	15-18 years	Mixed	English for Everyday communication
8. Pre-architecture (Year 1)	16-18 years	Mixed	English for Everyday communication

4. 4 Data Collection

Following a qualitative research tradition and an exploratory case study approach, the data was collected through semi-structured interviews. As defined by Potter (as cited in Leelasopawut, 2022, p. 115), an interview is "a technique of gathering data from humans by asking them questions and getting them to react verbally." In this study, semi-structured interviews were chosen as the most suitable method because the interviews allow flexibility in the order and phrasing of the questions (Kvale & Brinkmann, 2009). To this end, eight focus group interviews were conducted over a three-month period and were scheduled in accordance with the availability of both the participants and the researcher. Each session, which lasted between 30 and 60 minutes, was comprised of five students per group, resulting

in a total of 40 participants. The groups consisted of students from the following majors and years: Pre-Engineering Year 3 (Civil Engineering, Mechanical Engineering, and Electronics & Electrical Engineering), Pre-Architecture Year 1, Pre-Engineering Year 1 (English Program), and two bachelor's degree Engineering groups studying in the fields of Modern Electric Vehicles and Automation and Software Engineering. The interviews were held via Microsoft Teams (MS). The semi-structured interview schedule is provided in Appendix 1.

4.5 Data Analysis
The data analysis in this study was conducted using a thematic analysis approach, which involved several systematic steps. Firstly, the interview data was transcribed by the researcher to accurately capture the participants' responses. Secondly, the transcribed data was translated from Thai to English to ensure clarity and consistency in meaning, and to facilitate the international dissemination of the research. Thirdly, the English translations were reviewed by a full-time English lecturer holding a master's degree in TESOL to ensure the accuracy and preservation of the participants' original meanings. Fourthly, the interview data was analyzed in detail to identify meaningful patterns. Fifthly, the researcher became familiar with the data through the process of repeated reading in order to gain an in-depth understanding. Sixthly, initial codes were generated to represent the key features of the data. Seventhly, secondary codes were determined to further refine and organize the initial codes. The process continued with searching for themes, defining and naming them, and reviewing the potential themes to make certain that they accurately reflected the data. Finally, before being presented as the findings of this study, the identified themes were reviewed by two experts in Thematic Analysis within the field of EFL studies.

4.6 Trustworthiness of the study
To ensure the trustworthiness of this study, the researcher addressed credibility, transferability, dependability, and confirmability throughout the research process. Credibility was strengthened through strategies such as member checking, in which selected participants were invited to review and confirm the accuracy of the transcribed and translated excerpts, ensuring that their intended meanings were preserved. In addition, expert validation was conducted: two specialists in Thematic Analysis and one TESOL expert reviewed the coding procedures, theme development, and English translations to ensure that the interpretations were grounded in the data. Transferability was supported by providing detailed descriptions of the research context, participant characteristics, sampling procedures, and data collection methods, allowing readers to determine the applicability of the findings to other educational settings. Dependability was enhanced through a transparent and systematic documentation of the research steps including transcription, translation, coding, theme refinement, and expert review which together create an audit trail that can be examined by external reviewers. Finally, confirmability was maintained by employing multiple reviewers in the data checking process and by ensuring that interpretations were directly linked to participants' statements rather than the researcher's assumptions. These combined strategies contribute to the overall trustworthiness and methodological rigor of the study.

5. Results

This section presents the findings related to the three research questions. The first explores the perceived advantages of blended learning in English courses among RMUTL students. The second investigates the perceived barriers to learning through blended learning in these courses. The third examines the students' perspectives on how blended learning can be implemented more effectively in the context of EFL teaching. Based on these research questions, the following section presents the identified themes, sub-themes, and the supporting data.

5.1 RQ1: The Perceived Benefits of e-Learning from Students' Perspectives
The findings illustrated in Figure 1 highlight several key advantages of using e-Learning in English language courses among RMUTL students. These perceived benefits consisted of the comprehensive development of language skills, increased learner autonomy, enhanced confidence when using English, and the practical application of language skills in real-life contexts.

Theme 1: The comprehensive development of English language skills
As shown in Figure 1, students identified comprehensive improvement of all four language skills—listening, speaking, reading, and writing—as a key advantage. Participants noted that e-Learning platforms had offered balanced content that strengthened grammar and vocabulary. EP1 and V1 stated that blended learning "helps develop listening, speaking, reading, and writing skills... especially grammar and vocabulary usage." C1 and C2 emphasized the real-

life application of these skills, while R4 highlighted gains in reading comprehension and text interpretation, particularly for academic texts. The supporting interview data is provided in Table 1 (Appendix).
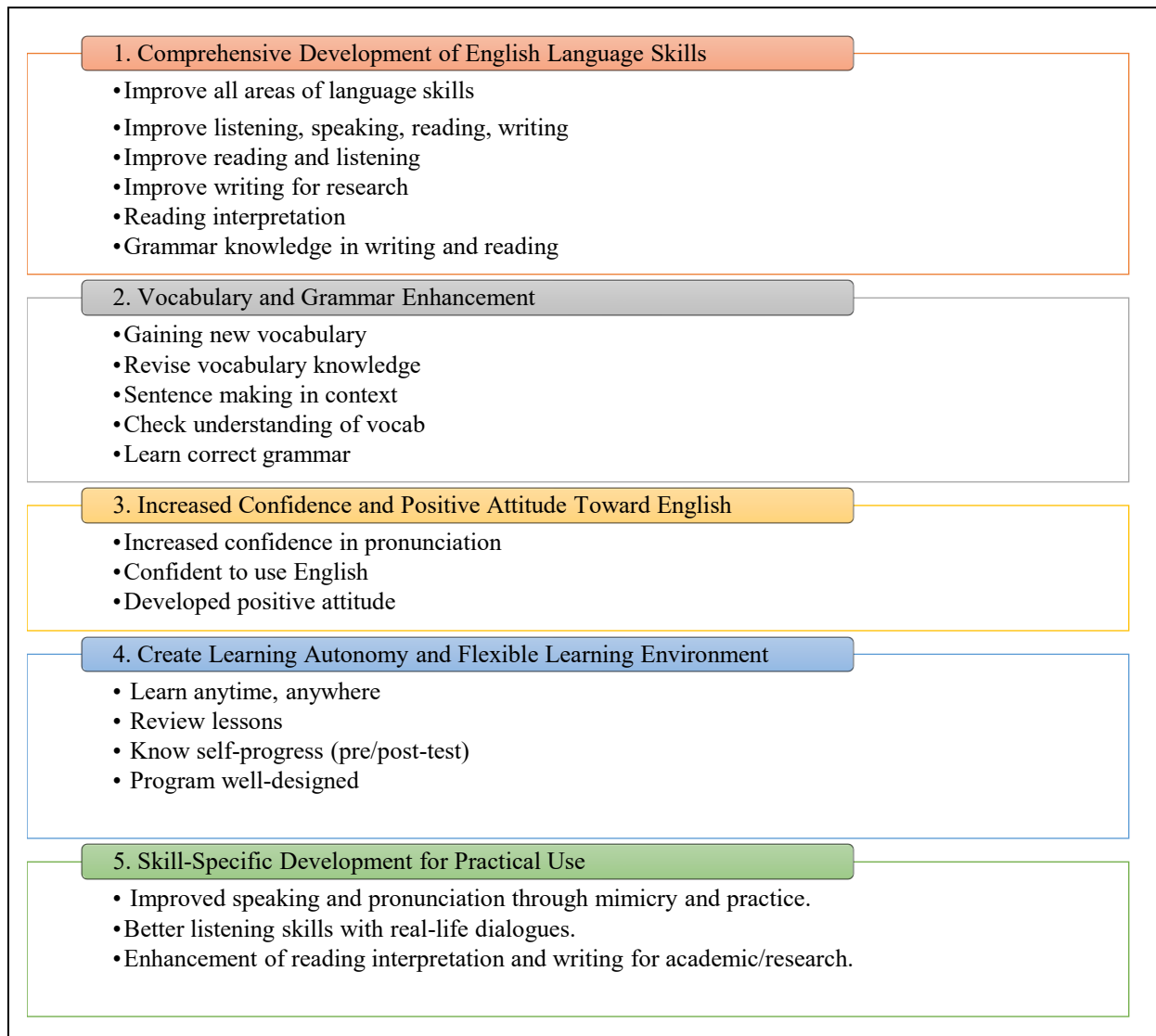
1. Comprehensive Development of English Language Skills
- Improve all areas of language skills
- Improve listening, speaking, reading, writing
- Improve reading and listening
- Improve writing for research
- Reading interpretation
- Grammar knowledge in writing and reading

2. Vocabulary and Grammar Enhancement
- Gaining new vocabulary
- Revise vocabulary knowledge
- Sentence making in context
- Check understanding of vocab
- Learn correct grammar

3. Increased Confidence and Positive Attitude Toward English
- Increased confidence in pronunciation
- Confident to use English
- Developed positive attitude

4. Create Learning Autonomy and Flexible Learning Environment
- Learn anytime, anywhere
- Review lessons
- Know self-progress (pre/post-test)
- Program well-designed

5. Skill-Specific Development for Practical Use
- Improved speaking and pronunciation through mimicry and practice.
- Better listening skills with real-life dialogues.
- Enhancement of reading interpretation and writing for academic/research.

Figure 1: Themes and sub-themes presenting the perceived benefits of e-Learning from students' perspectives.

Theme 2: Vocabulary and grammar enhancement
Figure 1 and Table 1 also illustrate improvements in vocabulary and grammar. Students (B1, Pre-art 3, R4, R3) appreciated the opportunities to learn new words, review known ones, and practice sentence construction in context. They valued clear grammar explanations that enhanced both their written and spoken accuracy. Pre-art 3 mentioned learning "more English vocabulary and also correct pronunciation," while R3 noted improvements in research-related vocabulary and grammar accuracy.

Theme 3: Increased confidence and more positive attitudes toward English
Many students (EP1, Pre-art 4, C2, and R4) reported increased confidence, especially in the areas of speaking and pronunciation. e-Learning tools that offered pronunciation practice and real-time speaking opportunities helped them to feel more comfortable when using English. Participants also highlighted that the supportive, interactive learning

environment had fostered a positive attitude toward learning English. C2 shared that they had been "more willing to use English" and had felt prepared for real-world communication. (See Table 1, Appendix.)

Theme 4: Creating learning autonomy and flexibility
Flexibility and independent learning were the major benefits of e-Learning (Figure 1). Students (M2, M4, B3, B4, E2, M1, B1) valued the ability to study at their own pace, review lessons, and to learn anywhere and at any time. Recorded lessons, self-assessment tools, and the user-friendly design had helped them to track their progress and revisit materials, which promoted self-directed learning. M2 and M4 noted that they could "listen to the recordings repeatedly," while B3 and B4 appreciated being able to "learn anywhere and at any time." (See Table 1, Appendix.)

Theme 5: Practical and Skill-specific development
Students (EP4, R2, R3, and R4) also valued e-Learning with respect to developing practical and skill-specific abilities (Figure 1). They practiced speaking and pronunciation with native speaker models through the processes of imitation and repetition, improved their listening skills via real-life dialogues, and enhanced their reading and academic writing skills for research purposes. R4 described practicing pronunciation by mimicking native speakers, while R3 reported gains in writing and vocabulary for academic use. (See Table 1, Appendix.)

Overall, the RMUTL students had viewed e-Learning as highly beneficial for English acquisition. It supported comprehensive language development, improved grammar and vocabulary, built confidence and positive attitudes, and promoted autonomy and flexible study. Additionally, e-Learning had facilitated practical skill application in real contexts. Consequently, well-designed blended learning environments foster proficiency, independence, and confidence, the key components of effective EFL learning.

5.2 RQ2: Perceived Barriers to Blended e-Learning in English Courses

In response to the second research question, students identified several barriers that had hindered their learning experiences within the blended e-Learning environment. These obstacles were categorized into five main themes: technical issues, workload and time constraints, assessment and learning validity, challenges with the learning environment, and motivation-related or psychological barriers. The findings are illustrated in Figure 2.

Theme 1: Technical issues
Technical difficulties were the most common challenge (Figure 2). Students (M2, B5, R2, and Pre-art 5) had reported unstable internet, platform lag during peak usage, and outdated devices that were unable to support the software. Lack of essential equipment, like microphones or cameras, and noisy environments had further disrupted learning. M2 stated, "The internet connection is not stable, which delays the test," while Pre-art 5 added, "It's too hot and noisy at home, I lose focus." (See Table 2, Appendix.)

Theme 2: Workloads and Time Constraints
Heavy workloads and limited study time posed another major barrier (Figure 2). Students (B1, E1, C2, and B2) felt that each unit had contained too much content, making completion time-consuming. Managing multiple subjects or preparing for exams had intensified the pressure, leading some to rush or neglect tasks. B1 explained, "Each unit contains too much content and takes a long time to complete," while B2 noted, "Too much work, little rest, no time left for other subjects." (See Table 2, Appendix.)

Theme 3: Assessment and learning validity
Students (B5 and R2) raised concerns about assessment reliability and fairness (Figure 2). System errors sometimes prevented assignment submission or caused test crashes. Speaking assessments had often failed to recognize accents, and repetitive content had reduced engagement (B4). Additionally, scores did not always reflect actual performance due to potential cheating. EP4 stated, "The results don't truly reflect students' performance because of ways to cheat." (See Table 2, Appendix.)

Theme 4: Issues with the learning environment
Home environments created additional challenges (Figure 2). Hot weather, noise, and a lack of private study spaces had hindered concentration. Some students (R2) also noted that they had experienced financial stress from higher electricity and internet costs. Pre-art 5 said, "Hot weather and loud noises made it hard to concentrate," while R2 added, "Extra costs like electricity and internet bills." (See Table 2, Appendix.)

Theme 5: Motivation and psychological barriers
Low motivation and psychological factors had reduced engagement (Figure 2). Repetitive content (M1), difficulty understanding the lessons (E2), and limited interaction with peers and instructors led to feelings of isolation. R3 explained, "I feel isolated because there's no interaction with teachers or classmates," while R2 noted, "There's no one I can contact for help when facing problems."

1. Technical Issues
- Unstable internet connection
- Website/program lags or freezes
- Login difficulties- Microphone/sound recognition errors
- Noisy environment
- Inadequate learning devices
- Lack of private learning space

2. Workload and Time Constraints
- Too much content in each unit
- Feeling overwhelmed or exhausted
- Busy preparing for university entrance exams- Forgetting deadlines and rushing to complete tasks
- Not enough time for the program due to other subjects

3. Assessment and Learning Validity
- Website or system errors
- Repetitive content
- Unreliable speaking assessment (e.g., accent misread)
- Scores don't reflect actual ability
- Cannot submit assignments when system fails

4. Learning Environment Issues
- Hot temperature- Noisy surroundings
- Lack of focus at home
- Additional household expenses
- No access to quiet or appropriate learning space

5. Motivation and Psychological Barriers
- Lack of motivation or interest
- Feeling bored by repetitive content
- Difficulty understanding content (listening, reading, writing)
- Lack of interaction with peers or instructors
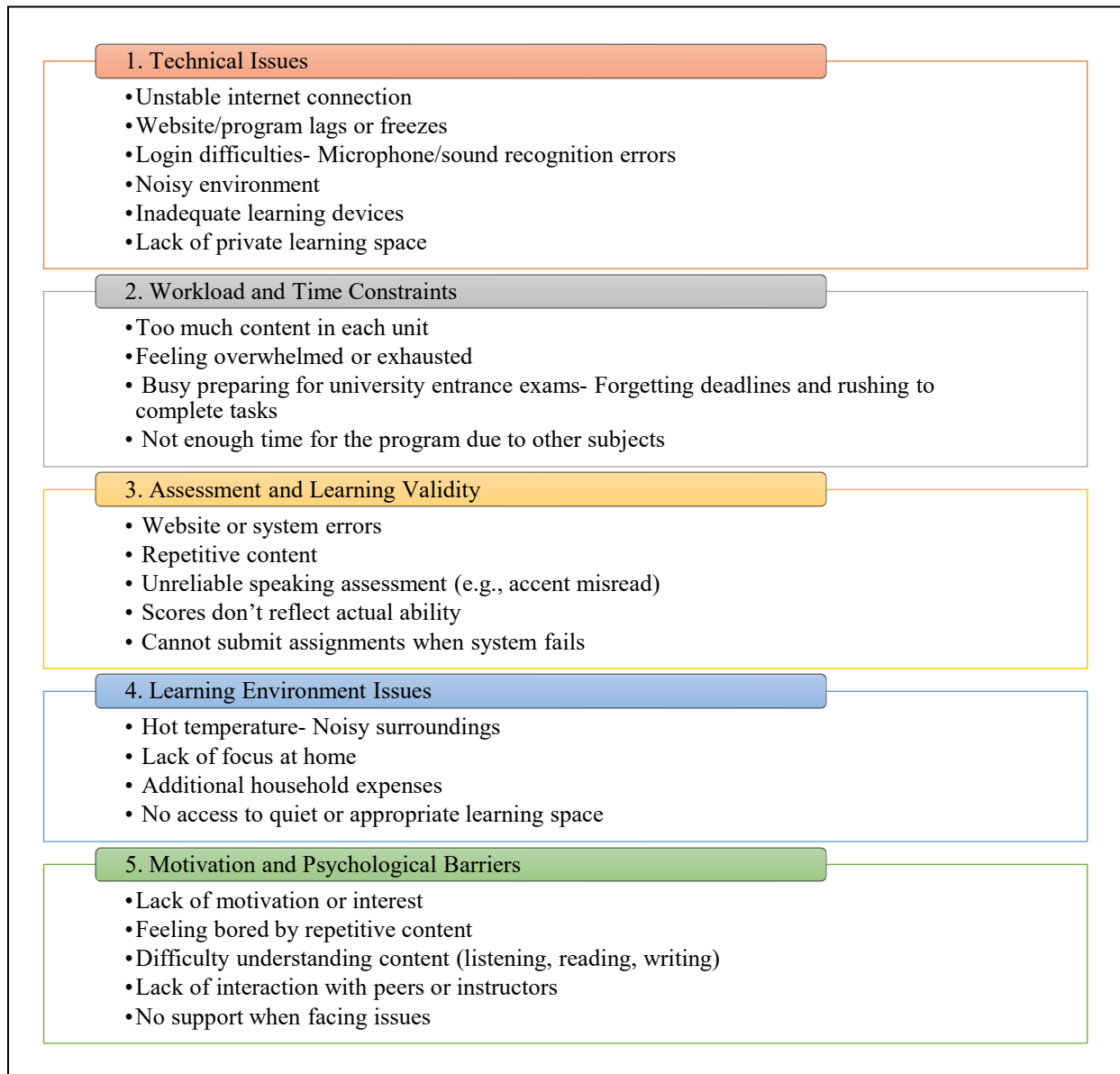- No support when facing issues

Figure 2: Themes and sub-themes presenting the perceived barriers of e-Learning from students' perspectives.

Overall, RMUTL students faced multiple barriers to blended EFL learning: technical issues, heavy workloads, unreliable assessments, challenging home environments, and low motivation. Addressing these issues—through improved technology, balanced workloads, fair assessments, supportive study environments, and strategies to enhance motivation—is essential in order to provide more effective blended learning.

5.3 RQ3: Students' Suggestions and Recommendations for Enhancing Blended e-Learning in EFL Teaching
The findings revealed a variety of insightful suggestions aimed at improving the effectiveness and accessibility of blended e-Learning in English courses, as illustrated in Figure 3 and Table 3 in the Appendix. These recommendations

can be categorized into five main themes: learning environment and accessibility, content and curriculum improvement, platform and technical enhancement, motivation and engagement, and assessment and monitoring.
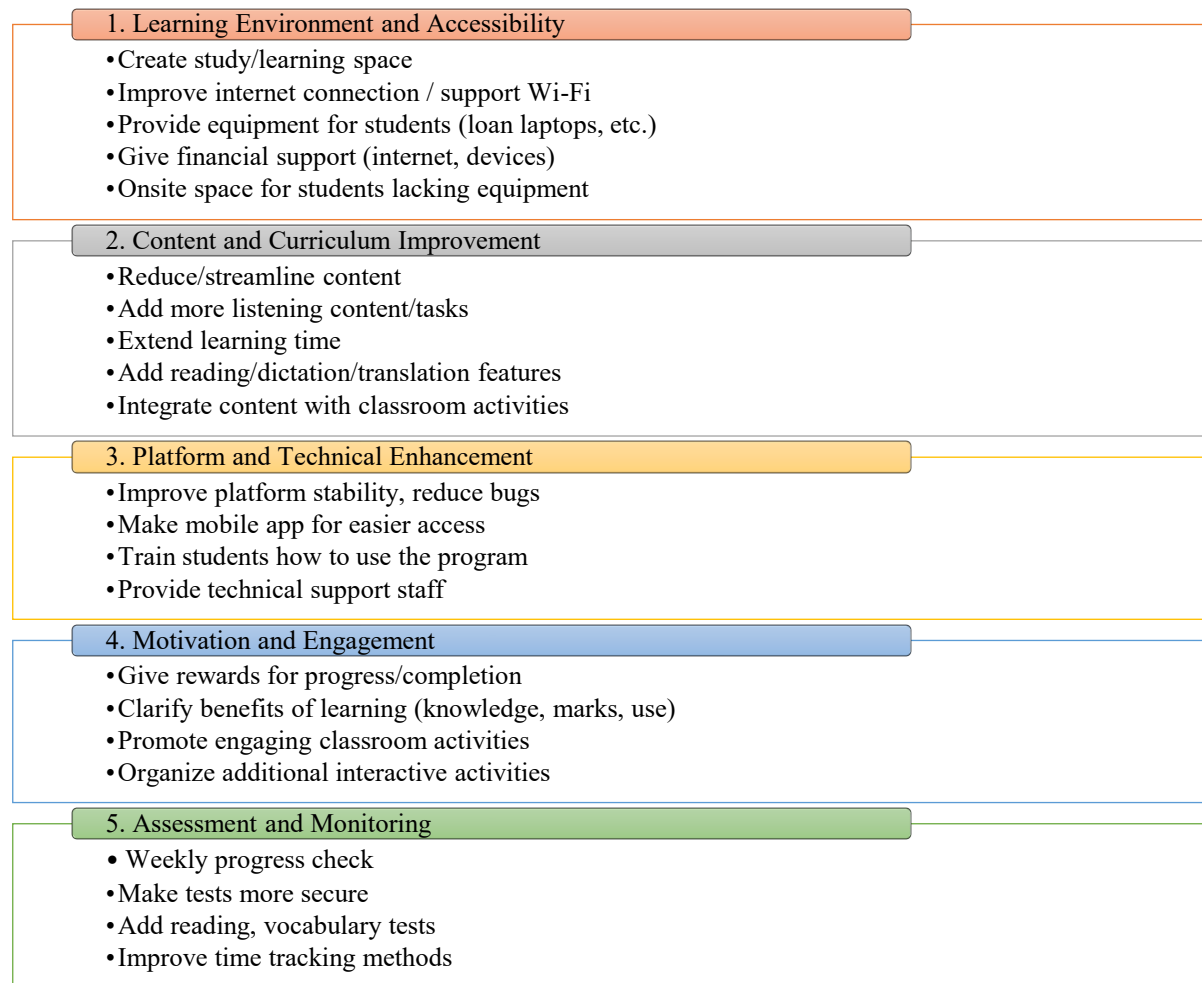
1. Learning Environment and Accessibility
- Create study/learning space
- Improve internet connection / support Wi-Fi
- Provide equipment for students (loan laptops, etc.)
- Give financial support (internet, devices)
- Onsite space for students lacking equipment

2. Content and Curriculum Improvement
- Reduce/streamline content
- Add more listening content/tasks
- Extend learning time
- Add reading/dictation/translation features
- Integrate content with classroom activities

3. Platform and Technical Enhancement
- Improve platform stability, reduce bugs
- Make mobile app for easier access
- Train students how to use the program
- Provide technical support staff

4. Motivation and Engagement
- Give rewards for progress/completion
- Clarify benefits of learning (knowledge, marks, use)
- Promote engaging classroom activities
- Organize additional interactive activities

5. Assessment and Monitoring
- Weekly progress check
- Make tests more secure
- Add reading, vocabulary tests
- Improve time tracking methods

Figure 3: Themes and sub-themes presenting students' suggestions and recommendations for enhancing blended e-Learning in English courses.

Theme 1: Learning environment and accessibility
Students highlighted the need for conducive learning spaces and reliable access to resources (Figure 3). Participants (Pre-art 1, E2, E4, R2, and V1) suggested designated study areas online or on campus. Improving internet connectivity and providing financial support for internet costs were also considered to be essential (M3). Additionally, students (B1, C1, E1, R2, R4, Pre-art 4, and M3) recommended equipment loan services, such as laptops, to ensure equitable access and to address digital divides. (See Table 3, Appendix.)

Theme 2: Content and curriculum improvement
Students (B1, B2, and B4) reported that some units were too lengthy or dense, affecting study time management. Suggestions consisted of reducing content, adding more listening activities, and extending assignment deadlines (B2). Integrating online materials with in-class activities (M1 and C1) and offering diverse exercises like reading, dictation, and vocabulary translation (B4 and M1) were also recommended to create a more cohesive and practical learning experience. (See Table 3, Appendix.)

Theme 3: Platform and technical enhancement
Technical reliability was a major concern (Figure 3). Students (B1, EP1, B3–B5, E5, and V2) requested stable systems to minimize bugs and freezing. B1 suggested a mobile app for easier access, while E1 and R2 recommended tutorials

before the semester. Having dedicated technical support personnel was also emphasized (R2 and R3). (See Table 3, Appendix.)

Theme 4: Motivation and engagement
To boost motivation, students (M1, C2, and E4) proposed reward systems, clear communication about the benefits of blended learning, and interactive activities. In addition, live sessions with native speakers (EP2, C1, and R1) were suggested to increase engagement and create a dynamic and socially enriching experience. (See Table 3, Appendix.)

Theme 5: Assessment and monitoring
Students (M1 and E4) advocated for more rigorous and supportive assessment practices. Recommendations included regular weekly progress checks, secure and fair exams (EP4), diverse tests covering reading and vocabulary (B4 and M1), and accurate time-tracking systems (M1). These measures would aim at providing comprehensive feedback and ensuring accountability. (See Table 3, Appendix.)

In summary, students suggested enhancing blended EFL learning in five areas: 1) improving the learning environment and access (e.g., study spaces, better internet, device loans); 2) refining content and curriculum (e.g., lighter workloads, integrated online and in-class activities); 3) strengthening platform support (e.g., stable systems, tutorials, technical assistance); 4) boosting motivation and engagement (e.g., rewards, interactive activities, live sessions with native speakers); and 5) improving assessment and monitoring (e.g., secure exams, diverse tests, regular progress tracking). These recommendations aim at making blended learning more accessible, engaging, and effective for EFL students.

6. Discussion

This study explored three key research questions. Firstly, it investigated the perceived advantages of blended learning in English courses among students at RMUTL. Secondly, it examined the perceived barriers to learning in blended learning environments. Thirdly, it explored the students' perspectives on how blended learning can be more effectively implemented within the context of EFL teaching. Overall, the findings provided valuable insights into the students' perceptions of blended e-Learning in English language courses at RMUTL. The results aligned with the existing literature, highlighting the benefits, challenges, and student-driven recommendations that are related to blended learning in EFL settings. The key findings from the data analysis (See Tables 1, 2, and 3 in the Appendix.) are discussed below.

6.1 The Perceived Advantages of Blended Learning
In terms of advantages, the students identified several perceived benefits of blended e-learning, with the most prominent being the development of comprehensive English language skills. Students reported noticeable improvements in listening, speaking, reading, and writing, along with enhanced vocabulary acquisition and grammar knowledge. These findings were consistent with previous research studies (Alammary, 2019; Hong & Stapa, 2023; Hussein Al Noursi, 2021; Kantisa & Sitthitikul, 2020; Sarajari & Gilakjani, 2024; Wang et al., 2021; Yudhana, 2021), in which it was suggested that blended learning environments facilitate skill integration, promote deeper engagement with language content, enhance vocabulary acquisition, and improve academic achievement, particularly in language proficiency tests. Additionally, students had found value in the flexibility of e-learning, which enabled them to study at their own pace and revisit materials as needed. This supported the concept of learner autonomy and personalized learning, as originally proposed by Holec (1981), and was further reinforced by subsequent studies (Meyers et al., 2024; Watanapokakul, 2022), in which it was noted that blended e-Learning enhances students' ability to access learning "anytime, anywhere." This feature is particularly beneficial for learners balancing academic and personal responsibilities. Another notable advantage was the increase in students' confidence and their positive attitudes toward using English. Many participants reported feeling more comfortable speaking and interacting in the language, which aligned with Bandura's (2006) theory of self-efficacy and motivation in learning. The integration of interactive and practical tasks, such as pronunciation practice and vocabulary exercises, not only enhances language competence, but also increases the students' willingness to communicate. These findings, therefore, echo Kantisa & Sitthitikul (2020), whose study found that blended e-Learning enhances the learners' speaking skills as well as the learner's motivation.

6.2 Barriers to Effective Engagement in Blended Learning
Despite these advantages, several obstacles had hindered the students' full engagement with the blended e-Learning experience. Technical issues had been the most frequently reported barrier, including unstable internet connections, outdated devices, and unresponsive platforms. These technical difficulties have also been noted in previous studies

(Escandallo & Escandallo, 2024; Adarkwah, 2021; Shelly et al., 2024) as major constraints to the adoption of online learning, especially in developing regions where infrastructure may be insufficient. Students also highlighted issues related to time constraints and workload. The perception that individual units were content-heavy and time-consuming, combined with pressure from other academic demands, were found to contribute to learner fatigue and to reduce motivation. This aligned with findings from Shelly et al., 2024, who emphasized the importance of manageable course design in blended learning models. Concerns about assessment fairness and learning validity were also raised. Students expressed frustration with repetitive content and automated evaluation systems that had failed to capture their actual language proficiency, particularly in speaking tasks. These findings echoed previous concerns (Dritsas & Trigka, 2025) about the challenges of automated assessment tools and the need for more reliable evaluation methods in e-Learning environments. Most importantly, psychological and environmental factors, such as a lack of motivation, isolation, and unsuitable study environments emerged as significant barriers. Students reported feeling disconnected from peers and instructors, which had led to reduced engagement. These findings supported social constructivist theories (Vygotsky, 1978), which emphasize the role of interaction in language learning. Not only can the absence of interpersonal communication hinder language development, but it can also affect the emotional and cognitive well-being of the learners.

6.3 Recommendations for Improvement
To improve blended e-Learning in EFL courses, the findings suggested that while the approach offers significant pedagogical advantages, its implementation must be strategically designed to address technical, instructional, and socio-emotional challenges. Educational institutions should invest in robust technological infrastructure and ensure that students have access to essential tools, such as reliable internet connectivity and suitable devices. The university should make sure that all students have fair access to technology. This should include providing reliable internet, offering devices for the students to borrow, and giving quick technical support when problems arise.

From a pedagogical standpoint, course designers should aim at balancing the content load and incorporating diverse assessment methods that reflect the students' authentic language abilities. Enhancing motivation and reducing psychological barriers also requires fostering 'a sense of community' within the online environment. Opportunities for peer interaction, instructor feedback, and real-time communication can help to mitigate feelings of isolation and promote engagement. A key concern raised by students was related to the digital divide. Requests for stable internet access, loaned devices, and designated study spaces highlight that equitable access to technology remains a foundational requirement for successful blended learning. This resonated with previous findings emphasizing that without adequate resources, students are less able to meaningfully participate in online components (Escandallo & Escandallo, 2024). Therefore, universities must prioritize infrastructure support to ensure inclusive and equitable learning experiences.

Regarding curriculum and content design, students expressed a need for more focused and streamlined materials, particularly in the areas of listening and vocabulary. Overly dense content can hinder motivation and impair learning efficiency, which is an issue that has been frequently noted in the blended learning literature (Garrison & Kanuka, 2004; Wang et al., 2021). Based on this, it can be suggested that both online and in-person lessons should connect smoothly so that students can easily follow what they learn in each mode. The lessons should focus on key English skills, such as listening, speaking, and learning new vocabulary. Activities should be practical and based on real-life situations, such as projects, discussions, or problem-solving tasks. Different types of assessments, such as peer reviews, oral presentations, and self-reflection, can help students to check their progress in different ways. For teachers, regular training is important so that they can improve their use of digital tools, make lessons more interactive, and give effective feedback online. Creating teacher groups or communities can help them to better share ideas, reflect on their teaching, and learn from one another about what works best in blended learning. Both students and teachers should also have orientation or training sessions before classes start. This will help them to build confidence in using online platforms and digital tools. Having clear rules for assessment and opportunities for group work can further improve motivation, participation, and responsibility.

On the technical front, students had identified platform instability and limited technical support as major barriers. Their calls for system improvements and digital training reflect the need for greater technological fluency. Providing orientation sessions and responsive technical support, which can alleviate frustration and can reduce dropout rates, is consistent with the best practices in e-Learning implementation (Escandallo & Escandallo, 2024).

Motivation and engagement were also prominent themes. Suggestions, such as incorporating incentives, clearly communicating learning benefits, and including interactive tasks and live sessions, may counteract common issues like isolation and disengagement (Escandallo & Escandallo, 2024; Gaffas, 2023; Wang et al., 2021). Creating a more interactive and socially connected environment can increase the students' confidence and willingness to use English in practical contexts. Finally, students emphasized the importance of transparent and secure assessment practices. Regular progress tracking and varied forms of evaluation can offer timely feedback, support self-directed learning, and uphold academic integrity. Enhancing the reliability of time-tracking tools can also help to maintain student accountability in flexible learning settings.

Overall, to enhance blended EFL learning at RMUTL, teachers and the university can apply constructivist principles by encouraging students to learn through doing, to think critically, and to practice collaboration, rather than passively listening to lectures. The aim is to foster independent, active, and engaged learners. The strategies outlined above support a student-centered, technology-friendly environment that promotes effective English learning and prepares students for academic and future professional success.

7. Conclusions

This study explored the perceived advantages of and barriers to blended learning in English courses put forth by the RMUTL students, as well as their views on how to improve its effectiveness in the EFL context. The findings demonstrated that the RMUTL students had perceived several significant benefits of blended learning in their English courses, including comprehensive language skills development, increased learner autonomy, and enhanced confidence. However, the students had also faced notable challenges, such as technical issues, heavy workloads, and limited interactions, which can hinder their learning experiences. To optimize blended learning, students recommended improvements in learning environments, curriculum design, technological support, motivation strategies, and assessment practices. Addressing these areas holistically will help to create more accessible, engaging, and effective blended learning environments, which will ultimately support better outcomes in the EFL teaching context. The findings offer valuable insights for educators and institutions aiming to enhance blended learning implementations in similar settings. (See Tables 1, 2, and 3 in the Appendix.)

From the findings, several implications for practice can be drawn to enhance the effectiveness of blended e-Learning in EFL settings, especially in contexts similar to RMUTL. These implications are organized into five key main areas: infrastructure, pedagogy, assessment, student support, and policy.

Firstly, to ensure seamless access and to reduce disparities, institutions should invest in reliable technologies, such as stable internet, updated devices, and responsive platforms, and should provide digital literacy training, on-demand support, and equitable access through device loans, subsidized internet, or on-campus learning spaces.

Secondly, to support multimodal learning and sustained engagement, course materials should balance content load and align the online and in-person components. Moreover, in order to promote practical language usage and to maintain interest, interactive skill-based tasks should be emphasized, especially in listening, vocabulary, and speaking.

Thirdly, to ensure fair and transparent evaluation, institutions should carry out the following: 1) use a mix of formative and summative assessments (i.e., instructor-led speaking tasks and peer feedback), 2) clearly communicate criteria, 3) limit reliance on automated grading, and 4) use secure platforms. Progress tracking tools, such as dashboards, can also help students monitor and improve their learning.

Fourthly, peer collaboration and real-time interaction should be promoted to reduce isolation and boost motivation. Self-regulated learning should be supported with guidance, which focuses on time management, goal setting, and study strategies, while engagement can be enhanced through gamification, rewards, and clear links to real-world outcomes.

Finally, inclusive access to blended learning can be ensured by supporting students from diverse backgrounds and addressing infrastructure and/or socio-economic barriers. Professional development should be provided for educators in the areas of blended pedagogy, digital tools, and learner-centered design. In addition, to keep the courses responsive and effective, student feedback should be elicited and used regularly.

8. Limitations and future research

The two main concerns, which may have limited this study, were its methodology and sample size. Firstly, since this was a case study, a primary limitation may be related to the reliability and validity of the findings. Although case studies allow researchers to explore multiple realities and individual experiences (Creswell, 2013), the results may not be generalizable to a larger context. Secondly, the small number of participants in this study may have had an impact on its conclusion. In other words, from the findings of this study, it can be not claimed that blended e-Learning in EFL is effective within larger EFL contexts. Future studies could address the limitations of this research by using a larger sample size and adopting alternative methodologies, such as a quantitative research methodology or a mixed methodology so that the validity and reliability of the findings could be enhanced.

9. Authors' information

Rungkan Leelasopawut received a Ph.D in Education from the University of Exeter, Exeter, United Kingdom. She is currently an English lecturer at the Department of General Education, College of Integrated Science and Technology, Rajamangala University of Technology Lanna, Chiangmai, Thailand. Her research interests include interactional competence, conversation analysis, role-play and Thinking-based curriculum in English as a Foreign Language (EFL) teaching.

References

Adarkwah, M. A. (2021). "I'm not against online teaching, but what about us?": ICT in Ghana post Covid-19. *Education and information technologies*, *26*(2), 1665-1685. https://doi.org/10.1007/s10639-020-10331-z

Alammary, A. (2019). Blended learning models for introductory programming courses: A systematic review. *PloS one*, *14*(9), 1-26. https://doi.org/10.1371/journal.pone.0221765

Bada, S. O., & Olusegun, S. (2015). Constructivism learning theory: A paradigm for teaching and learning. *Journal of Research & Method in Education*, *5*(6), 66-70. http://doi.org/10.9790/7388-05616670

Bandura, A. (2006). Guide for constructing self-efficacy scales. In F. Pajares and T.S Urdan, *self-efficacy beliefs of adolescents* (pp. 307-337). Age Information Publishing: Greenwich *5*.

Boichuk, A., & Strutynska, T. (2024). Blended learning: An innovative approach in English language teaching. *ELT QUATERLY: An International Peer-Reviewed Journal, 18*(1-4), 13-20. https://www.researchgate.net/publication/351614215_Blended_Learning_An_Innovative_Approach_in_English_Language_Teaching

Cresswell, J. (2013). *Qualitative inquiry & research design: Choosing among five approaches.* London: Sage publications.

Dritsas, E., & Trigka, M. (2025). Methodological and technological advancements in E-learning. *Information*, *16*(1), 1-28. https://doi.org/10.3390/info16010056

Escandallo, J. C., & Escandallo, L. E. (2024). Exploring English major students' perspectives on blended learning: A Multiple Case Study. *International Journal of Asian Education*, *5*(2), 76-85. https://doi.org/10.46966/ijae.v5i2.375

Hennink, M., & Kaiser, B. N. (2022). Sample sizes for saturation in qualitative research: A systematic review of empirical tests. *Social science & medicine*, *292*, 114523. https://doi.org/10.1016/j.socscimed.2021.114523

Holec, H. (1981). *Autonomy and foreign language learning*. Oxford: Pergamon.

Hong, A. L. T., & Stapa, M. (2023). The effect of blended learning towards pupils' vocabulary development and motivation in an ESL classroom. *Journal of Nusantara Studies*, *8*(1), 406-428. https://doi.org/10.24200/jonus.vol8iss1pp406-428

Hussein Al Noursi, O. (2021). The impact of blended learning on the twelfth grade students' English language proficiency. *Arab World English Journal, 11*(4), 508-518. https://dx.doi.org/10.24093/awej/vol11no4.32

Gaffas, Z. M. (2023). Students' perceptions of e-Learning ESP course in virtual and blended learning modes. *Education and Information Technologies*, *28*(8), 10329-10358. https://dx.doi.org/10.1007/s10639-023-11579-x

Garrison, D. R., & Kanuka, H. (2004). Blended learning: Uncovering its transformative potential in higher education. *The internet and higher education*, *7*(2), 95-105. https://doi.org/10.1016/j.iheduc.2004.02.001

Guba, E. G., & Lincoln, Y. S. (1994). Competing paradigms in qualitative research. *Handbook of qualitative research*, *2*(163-194), 105.

Kantisa, P., & Sitthitikul, P. (2020). *Effects of blended learning on Thai EFL university students' speaking ability and learning motivation.* [Doctoral dissertation, Thammasat University]. https://ethesisarchive.library.tu.ac.th/thesis/2020/TU_2020_6021320061_12899_13746.pdf

Kim, L., Jindabot, T., Pongsakornrungsilp, S., & Horam, N. (2023). How to enhance perceived e-Learning usefulness: Evidence from Thai university students. *Abac Journal*, *43*(1), 18-33. https://doi.org/10.14456/abacj.2023.2

Kvale, S., & Brinkmann, S. (2009). *Interviews: Learning the craft of qualitative research interviewing*. sage.

Leelasopawut, R. (2022). *A study of thinking-based curriculum design in improving interactional competence for EFL in Thai context: A case study*. [Doctoral Dissertation, University of Exeter, UK] https://www.proquest.com/openview/766e24ff905f2884a12bc93cd30f02b6/1.pdf?pq-origsite=gscholar&cbl=51922&diss=y

Meyers, F. A., Smith, C., & Cekiso, M. (2024). First-year English additional language students' insight and attitudes on blended learning methods in academic writing. *Literator-Journal of Literary Criticism, Comparative Linguistics and Literary Studies*, *45*(1), 1-7. https://doi.org/10.4102/lit.v45i1.2016

Nedeva, V., & Dimova, E. (2010). Some advantages of e-Learning in English language training. *Trakia Journal of Sciences*, *8*(3), 21-28. https://www.researchgate.net/profile/Veselina-Nedeva/publication/268393688_some_advantages_of_e-learning_in_english_language_training/links/54f1dd010cf2b36214acdfe7/some-advantages-of-e-learning-in-english-language-training.pdf

Rahmani, A. M., Groot, W., & Rahmani, H. (2024). Dropout in online higher education: a systematic literature review. *International Journal of Educational Technology in Higher Education*, *21*(1), 19. https://doi.org/10.1186/s41239-024-00450-9

Ramalingam, S., Yunus, M. M., & Hashim, H. (2022). Blended learning strategies for sustainable English as a second language education: A systematic review. *Sustainability*, *14*(13), 8051. https://doi.org/10.3390/su14138051

Sarajari, M. R., & Gilakjani, A. P. (2024). Investigating the impact of online vs. blended learning on vocabulary learning: Evidence from intermediate EFL learners. *LLT Journal: A Journal on Language and Language Teaching*, *27*(1), 434-460. https://doi.org/10.24071/llt.v27i1.7207

Seok, S. (2008). Teaching aspects of e-learning. *International Journal on e-learning, 7*(4), 725-741. Retrieved from https://www.learntechlib.org/primary/p/24323/

Shelly, S., Idris, I., Mappaware, N. A., Rasyid, H., Bukhari, A., Afandi, I. N., & Amalia, A. (2024). Evaluation of blended learning in terms of the perceptions of medical students: A mixed method study. *Journal of Advances in Medical Education & Professionalism*, *12*(1), 28-36. https://doi.org/10.30476/jamp.2023.98956.1819

Vygotsky, L. S. (1978). *Mind in Society.* Cambridge, MA: Harvard University Press.

Wahab, I. (2024). The students' learning experienced toward the implementation of blended learning method. *Journal of English Language and Language Teaching*, *8*(1), 24-39. http://dx.doi.org/10.36841/pioneer.v14i1.1706

Wang, T., Lin, C. L., & Su, Y. S. (2021). Continuance intention of university students and online learning during the COVID-19 pandemic: A modified expectation confirmation model perspective. *Sustainability*, *13*(8), 1-15. https://doi.org/10.3390/su13084586

Watanapokakul, S. (2022). Blended online learning: Perceptions and experiences of EFL University students and teachers. r*EFLections*, *29*(1), 60-87. https://doi.org/10.61508/refl.v29i1.258511

Whitelock, D., & Jefts, A. (2003). Editorial: Journal of Educational Media special issue on blended learning. *Journal of Educational Media, 28*(2-3), 99-100. http://dx.doi.org/10.1080/1358165032000177407

Wongwuttiwat, J., Buraphadeja, V., & Tantontrakul, T. (2020). A case study of blended e-Learning in Thailand. *Interactive Technology and Smart Education*, *17*(2), 197-214. https://doi.org/10.1108/ITSE-10-2019-006

Yan, H. C., Song, Y. Q., & Han, Y. Y. (2024). An analysis on the blended teaching mode of college English. *Sino-US English Teaching*, *21*(1), 1-5. http://dx.doi.org/10.17265/1539-8072/2024.01.001

Yang, L., & Chano, J. (2025). The Impacts of Blended Learning on English Language Proficiency in Higher Education: A Systematic Literature Review. *Higher Education Studies*, *15*(2), 83-96.

Yin, R. K. (2009). *Case study research: Design and methods* (Vol. 5). SAGE publication.

Yudhana, S. (2021). The implementation of blended learning to enhance English reading skills of Thai undergraduate students. *English Language Teaching*, *14*(7), 1-7. https://doi.org/10.5539/elt.v14n7p1

Appendix

Appendix 1: Interview Schedule (Thai Version)

<div align="center">**คำถามที่ใช้ในการสัมภาษณ์ผู้เข้าร่วมงานวิจัย**</div>

คำชี้แจง

ขอบคุณที่ท่านสละเวลาให้สัมภาษณ์ครั้งนี้ ซึ่งเป็นส่วนสำคัญอย่างยิ่งที่จะให้ข้อคิดเห็นในมุมมองของนักศึกษาที่มีต่อการผสมผสาน E-Learning ในหลักสูตรภาษาอังกฤษและผลของ E-Learning ต่อความสำเร็จของนักศึกษาในภาษาอังกฤษ คำถามในการสัมภาษณ์แบ่งเป็น ๓ หัวข้อ คือ ข้อดี อุปสรรค และข้อเสนอแนะ ต่อการผสมผสาน e-Learning ในหลักสูตรภาษาอังกฤษของมหาวิทยาลัยเทคโนโลยีราชมงคลล้านนา โดยการสัมภาษณ์ครั้งนี้จะใช้เวลา ๓๐-๔๕ นาทีโดยประมาณ ท่านสามารถขอหยุดการสัมภาษณ์ได้ตลอดการสัมภาษณ์

หัวข้อสำหรับการสัมภาษณ์

ตอนที่ ๑ ข้อมูลทั่วไปเกี่ยวกับผู้ให้สัมภาษณ์

๑. กรุณาแนะนำตัวเอง ชื่อและนามสกุล สาขาที่เรียน อายุ วิชาภาษาอังกฤษที่ท่านได้ลงทะเบียนเรียนในปีการศึกษา ๒/๒๕๖๖ และผลคะแนนทดสอบออนไลน์ที่ท่านได้รับก่อนและหลังเรียน

ตอนที่ ๒ ข้อดีของการใช้โปรแกรมออนไลน์ต่อการเรียนภาษาอังกฤษ

๑. จากประสบการณ์ที่ท่านได้เรียนโปรแกรมการเรียนภาษาอังกฤษออนไลน์ในภาคเรียนที่ผ่านมา (ภาคเรียนที่ ๒/๒๕๖๖) ท่านได้รับประโยชน์จากการใช้โปรแกรมเรียนภาษาอังกฤษออนไลน์มีบ้างไหม หากมีประโยชน์ โปรแกรมออนไลน์นี้ได้ส่งเสริมทักษะภาษาอังกฤษของท่านอย่างไรบ้าง หรือมีประโยชน์ต่อท่านในด้านอื่นๆไหม อย่างไร

ตอนที่ ๓ อุปสรรคของการใช้โปรแกรมออนไลน์ต่อการเรียนภาษาอังกฤษ

๑. จากประสบการณ์ที่ท่านได้เรียนโปรแกรมการเรียนภาษาอังกฤษออนไลน์ในภาคเรียนที่ผ่านมาหรือภาคเรียนที่ ๒/๒๕๖๖ ท่านเจออุปสรรคในการใช้โปรแกรมเรียนภาษาอังกฤษออนไลน์มีบ้างไหม

๒. มีอุปสรรคอะไรบ้างที่ลดประสิทธิภาพการใช้โปรแกรมภาษาอังกฤษออนไลน์ในการพัฒนาทักษะภาษาอังกฤษของท่าน

ตอนที่ ๔

๑. ท่านมีข้อเสนอแนะอะไรบ้างที่จะทำให้นโยบายการใช้โปรแกรมเรียนภาษาอังกฤษออนไลน์มีประโยชน์สูงสุดต่อการพัฒนาทักษะภาษาอังกฤษของท่านหรือนักศึกษาของ มทร. ในอนาคต

Appendix 2: Interview Schedule (English Version)

<div align="center">

Interview Questions for Research Participants

</div>

Instructions:
Thank you for taking the time to participate in this interview. Your insights are crucial in providing a student's perspective on the integration of E-Learning in the English curriculum and its effects on student success in English. The interview questions are divided into three main sections: benefits, challenges, and suggestions regarding the integration of E-Learning in the English curriculum at Rajamangala University of Technology Lanna. The interview will take approximately 30–45 minutes. You may stop the interview at any time.

Interview Topics
Part 1: General Information about the Interviewee
Please introduce yourself: full name, major, age, the English course you enrolled in during the 2nd semester of the academic year 2023, and your online test scores before and after the course.
Part 2: Benefits of Using Online Programs in English Learning
Based on your experience in learning through the online English program in the past semester (2nd semester of the academic year 2023), did you find any benefits from using the online English learning program? If yes, how did the program help improve your English skills? Did it provide any other benefits? Please explain.
Part 3: Challenges of Using Online Programs in English Learning
From your experience with the online English program in the past semester or in the 2nd semester of the academic year 2023, did you face any challenges while using the program?
What obstacles affected the effectiveness of using the online English learning program in improving your English skills?
Part 4: Suggestions
What suggestions do you have to enhance the effectiveness of the online English learning program for improving English skills—either for yourself or for future students at RMUTL?

Appendix 3

Table 1: Perceived benefits of e-Learning from students' perspectives

Themes	Secondary coding	Primary coding (English)	Primary Coding Interview Data (Thai)
1.Comprehensive Development of English Language Skills	- Improve all areas of language skills - Improve listening, speaking, reading, writing - Improve reading and listening - Improve writing for research - Reading interpretation - Grammar knowledge in writing and reading	V1: "...beneficial for users in enhancing English skills—listening, speaking, reading, writing, grammar, and vocabulary—which the program delivers very well. The content is comprehensive, covering all these language areas..."	V1: มีประโยชน์ต่อผู้ใช้งาน ในด้านการเสริมทักษะภาษาอังกฤษ เช่น ทักษะการฟัง พูด อ่าน เขียน หลักไวยากรณ์ คำศัพท์ ซึ่งโปรแกรมทำออกมาค่อนข้างดีมาก เนื้อหาที่ใช้ครบเครื่อง ทั้งทักษะการฟัง พูด อ่าน เขียน หลักไวยากรณ์ คำศัพท์
		V2: "...very beneficial. We gained knowledge in our English course and improved reading and listening skills. Additionally, we got to practice speaking English, which helped us learn more vocabulary..."	V2: มีประโยชน์อย่างมากครับ เราได้รับความรู้เกี่ยวกับรายวิชาภาษาอังกฤษ และได้เพิ่มทักษะ ในการอ่านและฟัง แถมยังได้หัดพูดภาษาอังกฤษ ทำให้ได้รับความรู้และคำศัพท์ภาษาอังกฤษเพิ่มมากยิ่งขึ้น
		EP1: "...From my experience with the online English program in semester 2/2023, I benefited greatly. The program helped me clearly improve my listening, speaking, reading, and writing skills. I can understand spoken English better, speak more confidently, and my reading and writing have progressed well, especially in grammar and vocabulary. Moreover, the program gave me a more positive attitude towards using English and encouraged me to use English more in daily life..."	EP1: จากประสบการณ์การเรียนโปรแกรมภาษาอังกฤษออนไลน์ในภาคเรียนที่ ๒/๒๕๖๖ ผมได้รับประโยชน์อย่างมาก โปรแกรมนี้ช่วยพัฒนาทักษะการฟัง การพูด การอ่าน และการเขียนของผมได้อย่างชัดเจน ผมสามารถฟังและเข้าใจภาษาอังกฤษได้ดีขึ้น พูดอย่างมั่นใจมากขึ้น การอ่านและเขียนก็พัฒนาไปในทิศทางที่ดี โดยเฉพาะการใช้ไวยากรณ์และคำศัพท์ นอกจากนี้โปรแกรมยังทำให้ผมมีทัศนคติที่ดีต่อการใช้ภาษาอังกฤษมากขึ้น และกล้าใช้ภาษาอังกฤษในชีวิตประจำวันมากขึ้น
		EP3: "...This program greatly promotes English skills in listening, speaking, reading, and writing with correct grammar. I'm speaking more, can understand English better, and feel confident expressing myself in English..."	EP3: โปรแกรมนี้ได้ส่งเสริมทักษะภาษาอังกฤษในด้านการการฟัง พูด อ่าน เขียน และเขียนถูกต้องตามหลักไวยากรณ์ได้อย่างมาก มีการใช้ภาษาอังกฤษในการพูดมากขึ้น ฟังภาษาอังกฤษได้ดีขึ้น และกล้าแสดงออกในการพูดภาษาอังกฤษ
		B3: "...convenient for learning—you can study anywhere and anytime free—	B3: สะดวกต่อการเรียนรู้สามารถเรียนรู้ได้ทุกที่ทุกเวลาที่เราว่าง ได้

		and it benefits you in listening, speaking, reading, and writing..."	ประโยชน์ ทั้งการ ฟัง พูด อ่าน เขียน
		EP4: "...I learned English and could track my improvement through post-test/pre-test results..."	EP4: ได้เรียนรู้ภาษาอังกฤษโดยที่สามารถรู้การพัฒนาของตัวเองได้ จากการสอบ post-test/pre-test
		B2: "...beneficial because the content in English Discovery contains a vast vocabulary aligned with our textbook. It allowed us to practice listening and speaking through audio clips or articles with vocabulary from English Discovery 16, so we could review important grammar for speaking or writing sentences..."	B2: มีประโยชน์ เนื่องจากเนื้อหาใน โปรแกรมของ English Discovery มีคำศัพท์ที่มากมายตรงตามเนื้อหา ในหนังสือที่ได้เรียนมาและทำให้เรา ได้ฝึกทักษะการฟังและการพูดจาก คลิปเสียง หรือบทความ คำศัพท์ จาก English Discovery เพื่อให้ได้ ทบทวนไวยกรณ์ที่สำคัญต่อการใช้ ในการพูดหรือเขียนประโยคต่าง มากยิ่งขึ้น
		Pre-art1: "...beneficial in enhancing English listening and conversation skills. At first, I couldn't understand, but as classes progressed, I began to follow the content and understand..."	Pre-art1: มีประโยชน์ ช่วยเพิ่ม ทักษะการฟังภาษาอังกฤษและ สนทนาได้มากขึ้น จากที่ตอนแรกฟัง ไม่เข้าใจเลย พอคลาสหลังๆก็เริ่มทำ ให้เริ่มรู้แนวทางของเนื้อหามากขึ้น และเรียนเข้าใจ
		Pre-art5: "...I can listen to it somewhat and understand what it's trying to convey..."	Pre-art 5: ฟังได้บ้าง เข้าใจที่เขาจะ สื่อ
		M2: "...improved listening skills: in regular classes, I fell behind and couldn't play back, but online I could replay and learn anytime..."	M2: ได้ส่งเสริมการฟังได้อยากดี ใน คาบเรียนปกติยางครั้งตามไม่ทันไม่ สามารถฟังย้อนหลังได้ แต่ออนไลน์ สามารถฟังย้อนได้
		M4: "...also improved listening: sometimes I couldn't keep up in class, but online I could replay and revisit lessons anytime..."	M4: ได้ส่งเสริมการฟังได้อย่างดีใน คาบเรียนปกติบางครั้งตามไม่ทันไม่ สามารถฟังย้อนหลังได้ แต่ออนไลน์ สามารถฟังย้อนหลังได้ทำให้ สามารถกลับมาเรียนรู้ได้ตลอดเวลา
		E1: "...I think my listening improved slightly, my pronunciation and reading aloud are better, and I started using English in daily life, like chatting in group messages with friends..."	E1: คิดว่าการฟังดีขึ้นนิดหน่อย การ สะกดคำอ่านที่สามารถอ่านออก เสียงได้ดีขึ้น และเริ่มการใช้ ภาษาอังกฤษในชีวิตประจำวัน เช่น ในการคุยแชตกลุ่มกับเพื่อน เป็นต้น
		E2: "...beneficial because I can study anywhere and, when I have free time, the program is	E2: มีประโยชน์ เพราะ สามารถ เรียนได้ทุกที่ และเมื่อมีเวลาว่าง และตัวโปรแกรมก็มีการจัดการสอน

		well-structured and teaches listening and grammar well."	มาได้ดี โดยได้ทักษะการฟัง และหลักไวยากรณ์
		R4: "...writing skills: the online program offers varied writing practice—sentences and paragraphs—which helps develop word use and correct sentence structure..."	R4: ทักษะการเขียน: โปรแกรมออนไลน์มักมีการฝึกเขียนในลักษณะต่างๆ ทั้งการเขียนประโยคและย่อหน้า ซึ่งช่วยให้สามารถพัฒนาการใช้คำและการจัดเรียงประโยคให้ถูกต้อง
		R1: "...developed communication skills at work, learning to use English in real situations, practicing specialized vocabulary and expressions relevant to work via conversations and simulations, which made me feel more confident using English in real life..."	R1: พัฒนาทักษะการสื่อสารในที่ทำงานเรียนรู้การใช้ภาษาอังกฤษในสถานการณ์จริงฝึกฝนการใช้ศัพท์และสำนวนเฉพาะด้านที่เกี่ยวข้องกับการทำงานและได้ได้ฝึกฝนผ่านบทสนทนาและสถานการณ์จำลองช่วยให้รู้สึกมั่นใจมากขึ้นเมื่อใช้ภาษาในชีวิตจริง
		EP2: "...This program enhances English learning in many areas, both reading and writing, and improves many useful English skills..."	EP2: โปรแกรมนี้ได้เสริมการเรียนรู้ภาษาอังกฤษในหลายๆด้านทั้งอ่านและเขียน และยังเสริมทักษะที่มีประโยชน์ในหลายด้านทางภาษาอังกฤษอีกด้วย
		M3: "...gained better reading and listening skills..."	M3: ได้ทักษะในการอ่านและการฟังที่ดีขึ้น
		B5: "...very beneficial. We gained knowledge in English subjects, improved reading and listening skills, and practiced speaking English, which allowed us to learn English knowledge and vocabulary..."	B5: มีประโยชน์อย่างมาก เราได้รับความรู้เกี่ยวกับรายวิชาภาษาอังกฤษ และได้เพิ่มทักษะสกิวในการอ่านและฟัง แถมยังได้หัดพูดภาษาอังกฤษ ทำให้ได้รับความรู้และคำศัพท์ภาษาอังกฤษ
		R3: "...online English writing helps develop listening, speaking, and writing skills, supports research, and vocabulary by providing checks and tests that aid English usage..."	R3: การเขียนเรียนภาษาอังกฤษออนไลน์ช่วยพัฒนาทักษะฟัง-พูด-เขียนเสริมการวิจัยและคำศัพท์โดยเพิ่มการตรวจสอบและทดสอบที่ดีต่อภาษาอังกฤษอาจช่วยให้ใช้งานภาษาได้
		R4: "...reading skills: the variety of reading exercises and article reading practice helped improve reading comprehension and train us to interpret English texts better..."	R4: ทักษะการอ่าน: การมีแบบฝึกหัดการอ่านที่หลากหลายและการฝึกการอ่านบทความต่างๆ ช่วยเพิ่มความเข้าใจในการอ่านและทำให้เราได้ฝึกการตีความข้อความในภาษาอังกฤษได้ดีขึ้น

		R4 "...listening skills: the online program includes various audio clips or videos, especially native speaker conversations in different situations, which enhance understanding of English used in real life, including unfamiliar vocabulary and expressions..."	R4: ทักษะการฟัง: โปรแกรมออนไลน์มีคลิปเสียงหรือวิดีโอที่หลากหลาย โดยเฉพาะการฟังบทสนทนาจากเจ้าของภาษาที่พูดในสถานการณ์ต่างๆ ช่วยเพิ่มความเข้าใจในภาษาอังกฤษที่ใช้ในชีวิตจริง รวมถึงการฝึกการฟังคำศัพท์และสำนวนที่ไม่คุ้นเคย
		B4: "...very beneficial because learners in the English program develop their English significantly, and I believe others do too. Even a little improvement is valuable, and it helps use free time productively to continually develop oneself..."	B4: มีประโยชน์เป็นอย่างมาก เนื่องจากทำให้ผู้ที่เข้าเรียนโปรแกรมภาษาอังกฤษ มีการพัฒนาด้านภาษาอังกฤษเป็นอย่างมาก และเชื่อว่าผู้อื่นก็เช่นกัน ไม่มากก็น้อย และยังได้ใช้เวลาว่างให้เป็นประโยชน์ เพื่อที่จะทำการพัฒนาตัวเองอยู่เสมอ
		C1: "...beneficial in increasing listening, reading, and writing skills significantly, which can be applied to daily life through understandable communication..."	C1: มีประโยชน์ในการเพิ่มทักษะการฟัง การอ่าน และการเขียนที่มากขึ้น สามารถนำไปใช้ในชีวิตประจำได้โดยการสื่อสารที่เข้าใจกันและกัน
		C2: "...very beneficial. It helped improve English skills, and I became confident using English correctly and accurately compared to before. I can read and listen better, learned many unknown words, practiced sentence construction and word usage in different situations, which developed all skills and prepared me to use them in daily life..."	C2: ได้รับประโยชน์อย่างมาก ช่วยให้มีทักษะทางภาษาอังกฤษเพิ่มขึ้น กล้าที่จะใช้ภาษาอังกฤษ ใช้ภาษาอังกฤษได้ถูกต้องและแม่นยำกว่าเมื่อก่อน ทำให้อ่านและฟังภาษาอังกฤษได้ดีขึ้น ได้คำศัพท์ที่ไม่รู้จักมาอีกหลายคำได้ฝึกการเรียงประโยค การใช้คำและประโยคในแต่ละสถานการณ์ ทำให้พัฒนาทักษะทุกอย่างและพร้อมที่จะนำไปใช้ในชีวิตประจำวัน
		Pre-art3: "...beneficial in learning more English vocabulary and also learning correct pronunciation to speak with foreigners..."	Pre-art3: มีประโยชน์ในการเรียนรู้คำศัพท์ภาษาอังกฤษมากขึ้นและยังได้เรียนรู้สำเนียงภาษาที่ถูกต้องและนำไปพูดกับชาวต่างชาติได้
		B1: "I benefited because some content in English Discovery is similar to what was taught in the classroom. Studying it felt like a review session, which was advantageous. It also helped me	B1: ได้รับ เพราะเนื่องจากเนื้อหาใน English Discovery บางเนื้อหามีความคลายคลึงกับเนื้อหาในห้องเรียน เมื่อได้ศึกษา จึงเปรียบเสมือนการเรียนทบทวน ทำ

		learn new vocabulary and review English grammar."	ให้เกิดข้อดี และยังทำให้ได้รับคำศัพท์ใหม่ๆ รวมถึงได้ทบทวนไวยากรณ์ของภาษาอังกฤษ
		EP1: "From my experience learning English through the online program in Semester 2/2023, I gained a lot. This program clearly helped me improve my listening, speaking, reading, and writing skills. I could understand spoken English better, speak more confidently, and my reading and writing also improved, especially in terms of grammar and vocabulary. Additionally, the program gave me a more positive attitude toward using English and encouraged me to use it more in daily life."	Ep1: จากประสบการณ์การเรียนโปรแกรมภาษาอังกฤษออนไลน์ในภาคเรียนที่ ๒/๒๕๖๖ ผมได้รับประโยชน์อย่างมาก โปรแกรมนี้ช่วยพัฒนาทักษะการฟัง การพูด การอ่าน และการเขียนของผมได้อย่างชัดเจน ผมสามารถฟังและเข้าใจภาษาอังกฤษได้ดีขึ้น พูดอย่างมั่นใจมากขึ้น การอ่านและเขียนก็พัฒนาไปในทิศทางที่ดี โดยเฉพาะการใช้ไวยากรณ์และคำศัพท์ นอกจากนี้โปรแกรมยังทำให้ผมมีทัศนคติที่ดีต่อการใช้ภาษาอังกฤษมากขึ้น และกล้าใช้ภาษาอังกฤษในชีวิตประจำวันมากขึ้น
2. Vocabulary & Grammar Enhancement	- Gaining new vocabulary - Revise vocabulary knowledge - Sentence making in context - Check understanding of vocab - Learn correct grammar	EP3: "This program enhanced my English skills in listening, speaking, reading, and writing, and significantly helped me use grammar correctly. I speak English more, understand spoken English better, and feel more confident expressing myself in English."	EP3: โปรแกรมนี้ได้ส่งเสริมทักษะภาษาอังกฤษในด้านการการ�ัง พูด อ่าน เขียน และเขียนถูกต้องตามหลักไวยากรณ์ได้อย่างมาก มีการใช้ภาษาอังกฤษในการพูดมากขึ้น ฟังภาษาอังกฤษได้ดีขึ้น และกล้าแสดงออกในการพูดภาษาอังกฤษ
		EP5: "I benefited in terms of listening and speaking, as well as the correct use of grammar."	EP5: ได้ประโยชน์ในเรื่องของการฟังและการพูด และเรื่องของการใช้แกรมม่าที่ถูกต้อง
		E2: "It's beneficial because I can study anywhere and whenever I have free time. The program is well-organized and helps improve listening skills and grammar knowledge."	E2: มีประโยชน์ เพราะ สามารถเรียนได้ทุกที่ และเมื่อมีเวลาว่าง และตัวโปรแกรมก็มีการจัดการสอนมาได้ดี โดยได้ทักษะการฟัง และหลักไวยากรณ์
		R3: "Writing and learning English online help develop listening, speaking, and writing skills, enhance research abilities and vocabulary, and provide useful checks and assessments that improve English usage."	R3: การเขียนเรียนภาษาอังกฤษออนไลน์ช่วยพัฒนาทักษะฟัง-พูด-เขียนเสริมการวิจัยและคำศัพท์โดยเพิ่มการตรวจสอบและทดสอบที่ดีต่อภาษาอังกฤษอาจช่วยให้ใช้งานภาษาได้
		B2: "Beneficial because the English Discovery program	B:2 มีประโยชน์ เนื่องจากเนื้อหาในโปรแกรมของ English Discovery

		includes a wide range of vocabulary that matches the textbook content. It helped us practice listening and speaking through audio clips and articles, and review grammar that's important for speaking and writing correctly."	มีคำศัพท์ที่มากมายตรงตามเนื้อหาในหนังสือที่ได้เรียนมาและทำให้เราได้ฝึกทักษะการฟังและการพูดจากคลิปเสียง หรือบทความ คำศัพท์จาก English Discovery 16 เพื่อให้ได้ทบทวนไวยากรณ์ที่สำคัญต่อการใช้ในการพูดหรือเขียนประโยคต่าง มากยิ่งขึ้น
		C2: "I gained a lot. It helped me improve my English skills, made me more confident in using English, and allowed me to use the language more accurately. My reading and listening improved, I learned many new words, and I practiced sentence construction and vocabulary in different situations. This helped develop all my skills and prepared me to use English in everyday life."	C2: ได้รับประโยชน์อย่างมาก ช่วยให้มีทักษะทางภาษาอังกฤษเพิ่มขึ้น กล้าที่จะใช้ภาษาอังกฤษ ใช้ภาษาอังกฤษได้ถูกต้องและแม่นยำกว่าเมื่อก่อน ทำให้อ่านและฟังภาษาอังกฤษได้ดีขึ้น ได้คำศัพท์ที่ไม่รู้จักมาอีกหลายคำได้ฝึกการเรียงประโยค การใช้คำและประโยคในแต่ละสถานการณ์ ทำให้พัฒนาทักษะทุกอย่างและพร้อมที่จะนำไปใช้ในชีวิตประจำวัน
		B5: "Very beneficial. We gained knowledge related to our English course, improved our reading and listening skills, and got to practice speaking English, which helped us gain more knowledge and vocabulary."	B5: มีประโยชน์อย่างมาก เราได้รับความรู้เกี่ยวกับรายวิชาภาษาอังกฤษ และได้เพิ่มทักษะสกิวในการอ่านและฟัง แถมยังได้หัดพูดภาษาอังกฤษ ทำให้ได้รับความรู้และคำศัพท์ภาษาอังกฤษ
		R4 (Grammar & Vocabulary): "The program often includes clear explanations of grammar rules and vocabulary usage, helping learners understand and appropriately apply words and sentence structures."	R4: การใช้ไวยากรณ์และคำศัพท์: หลักสูตรมักจะมีการอธิบายหลักไวยากรณ์และการใช้คำศัพท์อย่างชัดเจน ทำให้สามารถเข้าใจและใช้คำศัพท์หรือโครงสร้างประโยคได้อย่างเหมาะสม
		B 1 : "I benefited because some of the content in English Discovery is similar to the classroom lessons. Studying it felt like review, which is useful. I also gained new vocabulary and reviewed grammar."	B1: ได้รับ เพราะเนื่องจากเนื้อหาใน English Discovery บางเนื้อหามีความคลายคลึงกับเนื้อหาในห้องเรียน เมื่อได้ศึกษา จึงเปรียบเสมือนการเรียนทบทวน ทำให้เกิดข้อดี และยังทำให้ได้รับคำศัพท์ใหม่ๆ รวมถึงได้ทบทวนไวยากรณ์ของภาษาอังกฤษ
		Pre-art3: "Beneficial in learning more English vocabulary and	Pre-art3: มีประโยชน์ในการเรียนรู้คำศัพท์ภาษาอังกฤษมากขึ้นและยัง

		also learning correct pronunciation, which I can now use when speaking with foreigners."	ได้เรียนรู้สำเนียงภาษาที่ถูกต้องและนำไปพูดกับชาวต่างชาติได้
		M1: "It helped review topics I had forgotten and provided small tips for test-taking. I also learned new vocabulary."	M1: ช่วยทบทวนหัวข้อบางหัวข้อที่ลืมไปแล้วหรือได้เกร็ดความรู้เล็กๆน้อยๆในการทำข้อสอบ และได้รู้จักคำศัพท์ใหม่ๆ
		R1: "I improved my communication skills at work, learned how to use English in real-life situations, and practiced work-related terms and expressions. Simulated conversations helped me feel more confident using English in real-life scenarios."	R1: พัฒนาทักษะการสื่อสารในที่ทำงาน เรียนรู้การใช้ภาษาอังกฤษในสถานการณ์จริงฝึกฝนการใช้ศัพท์และสำนวนเฉพาะด้านที่เกี่ยวข้องกับการทำงานและได้ได้ฝึกฝนผ่านบทสนทนาและสถานการณ์จำลองช่วยให้รู้สึกมั่นใจมากขึ้นเมื่อใช้ภาษาในชีวิตจริง
		R4: "The online program provides various audio clips and videos, especially native speaker dialogues in real-life situations. This improves understanding of practical English, including unfamiliar words and expressions."	R4: โปรแกรมออนไลน์มีคลิปเสียงหรือวิดีโอที่หลากหลาย โดยเฉพาะการฟังบทสนทนาจากเจ้าของภาษาที่พูดในสถานการณ์ต่างๆ ช่วยเพิ่มความเข้าใจในภาษาอังกฤษที่ใช้ในชีวิตจริง รวมถึงการฝึกการฟังคำศัพท์และสำนวนที่ไม่คุ้นเคย
3. Increase Confidence & Positive Attitude Toward English-Affective Factor in Learning	- Increased confidence in pronunciation - Confident to use English - Developed positive attitude	Pre-art4: "I got to use it a bit. It helped improve my pronunciation in speaking, which made me more confident."	Pre-art4: ได้ใช้บ้าง ส่งเสริมด้านการออกเสียงในการพูดทำให้มั่นใจขึ้น
		EP1: "From my experience with the online English program in the second semester of 2023, I gained significant benefits. This program clearly helped me develop my listening, speaking, reading, and writing skills. I was able to listen to and understand English better, speak more confidently, and my reading and writing improved positively—especially in grammar and vocabulary. Moreover, the program gave me a more positive attitude toward using English and encouraged me to use it more in daily life."	Ep1: จากประสบการณ์การเรียนโปรแกรมภาษาอังกฤษออนไลน์ในภาคเรียนที่ ๒/๒๕๖๖ ผมได้รับประโยชน์อย่างมาก โปรแกรมนี้ช่วยพัฒนาทักษะการฟัง การพูด การอ่าน และการเขียนของผมได้อย่างชัดเจน ผมสามารถฟังและเข้าใจภาษาอังกฤษได้ดีขึ้น พูดอย่างมั่นใจมากขึ้น การอ่านและเขียนก็พัฒนาไปในทิศทางที่ดี โดยเฉพาะการใช้ไวยากรณ์และคำศัพท์ นอกจากนี้โปรแกรมยังทำให้ผมมีทัศนคติที่ดีต่อการใช้ภาษาอังกฤษมากขึ้น และกล้าใช้ภาษาอังกฤษในชีวิตประจำวันมากขึ้น

		EP3: "This program enhanced my English skills in listening, speaking, reading, and writing, and helped me write with proper grammar. I used English more in speaking, improved my listening skills, and became more confident expressing myself in English."	EP3: โปรแกรมนี้ได้ส่งเสริมทักษะภาษาอังกฤษในด้านการการฟัง พูด อ่าน เขียน และเขียนถูกต้องตามหลักไวยากรณ์ได้อย่างมาก มีการใช้ภาษาอังกฤษในการพูดมากขึ้น ฟังภาษาอังกฤษได้ดีขึ้น และกล้าแสดงออกในการพูดภาษาอังกฤษ
		C2: "I greatly benefited. My English skills improved, and I became more confident in using the language. I can now use English more accurately and fluently than before. My reading and listening skills have improved, and I learned many new words. I practiced sentence construction and vocabulary usage in various situations. This helped develop all language skills and made me ready to use English in everyday life."	C2: ได้รับประโยชน์อย่างมาก ช่วยให้มีทักษะทางภาษาอังกฤษเพิ่มขึ้น กล้าที่จะใช้ภาษาอังกฤษ ใช้ภาษาอังกฤษได้ถูกต้องและแม่นยำกว่าเมื่อก่อน ทำให้อ่านและฟังภาษาอังกฤษได้ดีขึ้น ได้คำศัพท์ที่ไม่รู้จักมาอีกหลายคำได้ฝึกการเรียงประโยค การใช้คำและประโยคในแต่ละสถานการณ์ ทำให้พัฒนาทักษะทุกอย่างและพร้อมที่จะนำไปใช้ในชีวิตประจำวัน
		R1: "My communication skills at work improved. I learned to use English in real-life situations, practiced specialized vocabulary and expressions relevant to my job, and participated in dialogues and simulations. These experiences made me feel more confident using English in real-life situations."	R1: พัฒนาทักษะการสื่อสารในที่ทำงานเรียนรู้การใช้ภาษาอังกฤษในสถานการณ์จริงฝึกฝนการใช้ศัพท์และสำนวนเฉพาะด้านที่เกี่ยวข้องกับการทำงานแลได้ฝึกฝนผ่านบทสนทนาและสถานการณ์จำลอง ช่วยให้รู้สึกมั่นใจมากขึ้นเมื่อใช้ภาษาในชีวิตจริง
		R4 "The program helped foster a more positive attitude toward using English—especially through challenging practice and learning from mistakes—which made me feel more confident using English in daily life."	R4: ทัศนคติต่อการใช้ภาษาอังกฤษ: โปรแกรมช่วยเสริมทัศนคติที่ดีต่อการใช้ภาษาอังกฤษ โดยเฉพาะการฝึกฝนแบบท้าทายและการเรียนรู้จากข้อผิดพลาด ทำให้มีความมั่นใจมากขึ้นในการใช้ภาษาอังกฤษในชีวิตประจำวัน
4. Learning Autonomy & Flexible Learning Environment	- Learn anytime, anywhere - Review lessons - Know self-progress (pre/post-test) - Program well-designed	B3: "It is convenient for learning. You can study anytime and anywhere when you are free. It is beneficial for listening, speaking, reading, and writing skills."	B3: สะดวกต่อการเรียนรู้สามารถเรียนรู้ได้ทุกที่ทุกเวลาที่เราว่าง ได้ประโยชน์ ทั้งการ ฟัง พูด อ่าน เขียน
		B4: "It is very beneficial because it significantly improves the English skills of those who take the English program. I believe others have	B4: มีประโยชน์เป็นอย่างมาก เนื่องจากทำให้ผู้ที่เข้าเรียนโปรแกรมภาษาอังกฤษ มีการพัฒนา

		benefited too, at least to some extent. It also helps make good use of free time for continuous self-development."	ด้านภาษาอังกฤษเป็นอย่างมาก และเชื่อว่าผู้อื่นก็เช่นกัน ไม่มากก็น้อย และยังได้ใช้เวลาว่างให้เป็นประโยชน์ เพื่อที่จะทำการพัฒนาตัวเองอยู่เสมอ
		E2: "It is useful because I can study anywhere and whenever I have free time. The program is well-structured and helps develop listening skills and grammar."	E2: มีประโยชน์ เพราะ สามารถเรียนได้ทุกที่ และเมื่อมีเวลาว่าง และตัวโปรแกรมก็มีการจัดการสอนมาได้ดี โดยได้ทักษะการฟัง และหลักไวยากรณ์
		E5: "I can learn on my own and attend lessons multiple times. Unlike in a classroom, where if you miss something, you can't review it again."	E5: ได้เรียนรู้ด้วยตนเอง สามารถเข้าเรียนได้หลายๆครั้ง ต่างจากห้องเรียนที่ฟังไม่ทันก็ไม่สามารถทบทวนอีกรอบได้
		V1: "It is convenient to use and helps make good use of free time."	V1: สะดวกในการใช้ ทำให้สามารถใช้เวลาว่างให้เกิดประโยชน์
		M2: "It significantly supports listening skills. In regular classes, sometimes I can't keep up and can't listen again. But online, I can replay and review."	M2: ได้ส่งเสริมการฟังได้อยากดี ในคาบเรียนปกติยางครั้งตามไม่ทันไม่สามารถฟังย้อนหลังได้ แต่ออนไลน์สามารถฟังย้อนได้
		M4: "It effectively supports listening skills. In regular classes, it's sometimes hard to keep up and I can't listen again. But online, I can replay the content, which allows me to learn at any time."	M4: ได้ส่งเสริมการฟังได้อย่างดีในคาบเรียนปกติบางครั้งตามไม่ทันไม่สามารถฟังย้อนหลังได้ แต่ออนไลน์สามารถฟังย้อนหลังได้ทำให้สามารถกลับมาเรียนรู้ได้ตลอดเวลา
		M1: "It helps review certain topics that I had forgotten and gives small tips for taking exams. I also learned new vocabulary."	M1: ช่วยทบทวนหัวข้อบางหัวข้อที่ลืมไปแล้วหรือได้เก็ร์ดความรู้เล็กๆน้อยๆในการทำข้อสอบและได้รู้จักคำศัพท์ใหม่ๆ EP4: ได้เรียนรู้ภาษาอังกฤษโดยที่สามารถรู้การพัฒนาของตัวเองได้จากการสอบ post-test/pre-test
		EP4: "I learned English and was able to track my own progress through post-tests and pre-tests."	EP4: "ได้เรียนภาษาอังกฤษและสามารถติดตามความก้าวหน้าของตัวเองได้ผ่านการทดสอบก่อนเรียนและหลังเรียน"
		E2 (repeated): "It is useful because I can study anywhere and whenever I have free time. The program is well-structured	E2: มีประโยชน์ เพราะสามารถเรียนได้ทุกที่ และเมื่อมีเวลาว่าง และตัวโปรแกรมก็มีการจัดการสอน

Themes	Sub-themes	Primary coding (English)	Primary coding (Thai)
		and helps develop listening skills and grammar."	มาได้ดี โดยได้ทักษะการฟัง และ หลักไวยากรณ์
5. Skill-Specific Development for Practical Use	- Improved speaking and pronunciation through mimicry and practice. - Better listening skills with real-life dialogues. - Enhancement of reading interpretation and writing for academic/research.	R4: "Some types of programs have features that allow us to practice speaking by answering questions or imitating the pronunciation of native speakers. This helps improve pronunciation and build confidence in speaking."	R4: ทักษะการพูด: โปรแกรมบาง ประเภทมีฟีเจอร์ที่ให้เราฝึกพูด โดย การตอบคำถามหรือเลียนแบบการ ออกเสียงจากเจ้าของภาษา ทำให้ สามารถพัฒนาการออกเสียงและ ความมั่นใจในการพูด
		R2: "I practiced speaking English and different accents, and I also practiced writing words that will be useful in the future."	R2: ได้ฝึกพูดภาษาอังกฤษและฝึก สำเนียงต่างๆและได้ฝึกเขียนคำที่ ต้องใช้ในอนาคต
		R3: "Learning English online helps develop listening, speaking, and writing skills, supports research, and builds vocabulary. It also includes assessments and tests that may enhance practical language use."	R3: การเขียนเรียนภาษาอังกฤษ ออนไลน์ช่วยพัฒนาทักษะฟัง-พูด- เขียนเสริมการวิจัยและคำศัพท์โดย เพิ่มการตรวจสอบและทดสอบที่ดี ต่อภาษาอังกฤษอาจช่วยให้ใช้งาน ภาษาได้
		EP4: "I learned English and was able to monitor my own progress through post-tests and pre-tests."	EP4: ได้เรียนรู้ภาษาอังกฤษโดยที่ สามารถรู้การพัฒนาของตัวเองได้ จากการสอบ post-test/pre-test

Table 2: Students' perceptions of obstacles in blended e-learning

Themes	Sub-themes	Primary coding (English)	Primary coding (Thai)
1. Technical Issues	- Unstable internet connection - Website/program lags or freezes - Login difficulties- Microphone/sound recognition errors - Noisy environment - Inadequate learning devices - Lack of private learning space	M2: "The internet connection is not stable, which delays the test."	M2: "อินเตอร์เน็ตไม่ค่อยเสถียร ทำ ให้ทำแบบทดสอบได้ล่าช้า"
		B5: "When too many users access the platform, it becomes unresponsive or freezes."	B5: "โปรแกรมไม่ตอบสนอง หรือ ค้างเวลาคนใช้เยอะ"
		R2: "My old laptop can't support the software needed."	R2: "ไม่มีไมโครโฟน กล้อง หรือ แป้นพิมพ์"
		Pre-art 5: "It's too hot and noisy at home, I lose focus."	Pre-art 5: "อากาศร้อน เสียงดัง ไม่ มีสมาธิ"
		R2: "I don't have a proper space to study."	R2: "ไม่มีสถานที่ที่เหมาะสมสำหรับ การเรียน"
		R4:"The equipment is outdated and does not support the programs needed for learning."	R4: "อุปกรณ์มีอายุใช้งานนาน ไม่ รองรับโปรแกรมที่ต้องใช้เรียน"
2. Workload and Time Constraints	- Too much content in each unit - Feeling overwhelmed or exhausted	B1: "Each unit contains too much content and takes a long time to complete."	"เนื้อหาในหนึ่ง Unit เยอะเกินไป ทำให้ใช้เวลานานขึ้น"
		E1: "Assignments from other courses slow my progress."	E1: "งานเยอะจากรายวิชาอื่นๆ ทำ ให้ความก้าวหน้าช้ากว่าปกติ"

	- Busy preparing for university entrance exams- Forgetting deadlines and rushing to complete tasks - Not enough time for the program due to other subjects	C2: "I was busy preparing for entrance exams and had no time to study."	C2: "เป็นเทอมที่ต้องสอบเข้า ไม่มีเวลาเรียนมาก"
		B2: "Too much work, little rest, no time left for other subjects."	B2: "เจียดเวลาไปทำวิชาอื่นไม่ได้มากพอ"
3. Assessment and Learning Validity	- Website or system errors - Repetitive content - Unreliable speaking assessment (e.g., accent misread) - Scores don't reflect actual ability - Cannot submit assignments when system fails	B5: "Sometimes the platform is slow or inaccessible, especially when many users are online."	B5: "บางครั้งแพลตฟอร์มก็ช้าหรือไม่สามารถเข้าใช้งานได้โดยเฉพาะเมื่อมีผู้ใช้งานจำนวนมากในเวลาเดียวกัน"
		B4: "Too much-repeated content and tests."	B4: "เนื้อหาและแบบทดสอบซ้ำกันมากเกินไป"
		EP4: "The results don't truly reflect students' performance because of ways to cheat."	EP4: "ผลสอบไม่ได้ชี้วัดที่ชัดเจนเพราะมีช่องโหว่ให้ใช้ตัวช่วย"
		R2: "I couldn't submit my work on time due to system errors."	R2: "ไม่สามารถส่งงานได้เมื่อระบบขัดข้อง"
4. Learning Environment Issues	- Hot temperature- Noisy surroundings - Lack of focus at home - Additional household expenses - No access to quiet or appropriate learning space	Pre-art 5: "Hot weather and loud noise made it hard to concentrate."	Pre-art 5: "อากาศร้อน เสียงดัง ไม่มีสมาธิ"
		R2: "My home is not suitable for studying."	R2: "ไม่มีพื้นที่ส่วนตัวในการเรียน"
		R2: "Extra costs like electricity and internet bills."	R2: "ค่าไฟฟ้า ค่าอินเทอร์เน็ต อุปกรณ์เสริม"
5. Motivation and Psychological Barriers	- Lack of motivation or interest - Feeling bored by repetitive content - Difficulty understanding content (listening, reading, writing) - Lack of interaction with peers or instructors - No support when facing issues	M1: "I lack motivation to do the activities."	M1: "ขาดแรงจูงใจในการทำ"
		E2: "Too many exercises and background noise disturb the speaking and listening practices."	E2: "อุปสรรคคือเสียงรบกวน และแบบฝึกหัดเยอะเกินความจำเป็น"
		R2: "There's no one I can contact for help when facing problems." (R2)	R2: "ไม่มีคนติดต่อเมื่อเจอปัญหาในการเรียน"
		R3: I feel isolated because there's no interaction with teachers or classmates."	R3: "ขาดปฏิสัมพันธ์กับผู้สอนหรือเพื่อน"

Table 3: Students' suggestions and recommendations for blended e-Learning in EFL context

Themes	Sub-themes	Primary coding (English)	Primary coding (Thai)
1. Learning Environment and Accessibility	- Create study/learning space - Improve internet connection / support Wi-Fi - Provide equipment for students (loan laptops, etc.)	Pre-art 1, E2, E4: "Organizing a suitable online learning space, providing a study space and necessary equipment"	Pre-art 1, E2, E4: "จัดพื้นที่เรียนออนไลน์ให้เหมาะสม, จัดพื้นที่ในการเรียนและอุปกรณ์ที่จำเป็น"

	- Give financial support (internet, devices) - Onsite space for students lacking equipment	Pre-art 1, E2, E4: "Organizing a suitable online learning space, providing a study space and necessary equipment"	Pre-Art 1, E2, E4: "การจัดสรรพื้นที่การเรียนรู้ออนไลน์ที่เหมาะสม จัดเตรียมสภาพแวดล้อมที่เอื้อต่อการเรียน และการเข้าถึงเครื่องมือการเรียนรู้ที่เหมาะสม จะช่วยพัฒนาประสบการณ์การเรียนได้"
		Pre-art 1, 3, 5: "Slow internet issues"	Pre-art 1, 3, 5: "ปัญหาเน็ตช้า"
		M3: "Support for internet costs"	ช้าM3: "สนับสนุนค่าอินเทอร์เน็ต"
		B1, C1, E1, R2, R4: "Electronic device borrowing services, support for learning equipment"	B1, C1, E1, R2, R4: "บริการยืมอุปกรณ์อิเล็กทรอนิกส์, สนับสนุนอุปกรณ์"
		Pre-art 4, M3: "Support for internet and equipment expenses"	Pre-art 4, M3: "สนับสนุนค่าใช้จ่ายอินเทอร์เน็ตและอุปกรณ์"
		R2, V1: "Setting up a New Normal-style online learning space for students who lack equipment"	R2, V1: "จัดพื้นที่เรียนออนไลน์แบบ New Normal สำหรับนักศึกษาที่ไม่พร้อมอุปกรณ์"
2. Content and Curriculum Improvement	- Reduce/streamline content - Add more listening content/tasks - Extend learning time - Add reading/dictation/translation features - Integrate content with classroom activities	B1, B2, B4: "Would like the content and exercises to be more concise"	B1, B2, B4: "อยากให้เนื้อหาและแบบฝึกหัดกระชับขึ้น"
		B2: "Would like more listening content to be added"	B2: "อยากให้เพิ่มเนื้อหาการฟัง"
		B2: "Would like extended time to complete assignments"	B2: "อยากให้ขยายเวลาในการทำ"
		B4, M1: "Would like reading tests, vocabulary translation, and memorization"	B4, M1: "อยากให้สอบอ่าน, แปลคำ, ท่องศัพท์"
		M1, C1: "Integrate classroom activities with online content"	M1, C1: "นำกิจกรรมในห้องเรียนมาบูรณาการกับเนื้อหาออนไลน์"
3. 3. Platform and Technical Enhancement	- Improve platform stability, reduce bugs - Make mobile app for easier access	B1, EP1, B3, B4, B5, E5, V2: "Improve system stability"	B1, EP1, B3, B4, B5, E5, V2: "ปรับปรุงความเสถียรของระบบ"

	- Train students how to use the program - Provide technical support staff	B1: "Develop it into an application for easier access"	B1: "ปรับเป็นแอปพลิเคชันให้เข้าถึงง่าย"
		E1, R2: "There should be an introduction or training on how to use the program before classes begin"	E1, R2: "ควรมีการแนะนำหรืออบรมการใช้งานโปรแกรมก่อนเรียน"
		R2, R3: "Have a technical support team available to assist"	R2, R3: "มีทีมเจ้าหน้าที่ช่วยเหลือด้านเทคนิค"
4. Motivation and Engagement	- Give rewards for progress/completion - Clarify benefits of learning (knowledge, marks, use) - Promote engaging classroom activities - Organize additional interactive activities	M1, C2, E4: "Provide rewards or bonus points to boost motivation"	M1, C2, E4: "ให้รางวัล, คะแนนเสริม เพื่อสร้างแรงจูงใจ"
		M1: "Help learners see the benefits they gain from learning"	M1: "ให้ผู้เรียนเห็นประโยชน์ที่ได้จากการเรียน"
		M1, C2, E4: "Provide rewards or bonus points to boost motivation"	M1, C2, E4: "ให้รางวัล, คะแนนเสริม เพื่อสร้างแรงจูงใจ"
		EP2, C1: "Organize alongside online learning"	EP2, C1: "จัดการเรียนการสอนแบบพบหน้าไปพร้อมกับการเรียนออนไลน์"
		R1: "Students had the opportunity to talk with foreigners, live session in-class activities"	R1: "นักเรียนมีโอกาสได้พูดคุยกับชาวต่างชาติและเข้าร่วมกิจกรรมสดในห้องเรียน"
5. Assessment and Monitoring	- Weekly progress check - Make tests more secure - Add reading, vocabulary tests - Improve time tracking methods	M1, E4: "Monitor progress on a weekly basis"	M1, E4: "ตรวจสอบความก้าวหน้าเป็นรายสัปดาห์"
		EP4: "Make the examination system more secure and strict"	EP4: "ทำให้ระบบสอบมีความรัดกุม"
		B4, M1: "Would like reading or vocabulary tests"	B4, M1: "อยากให้สอบอ่านหรือสอบคำศัพท์"
		M1: "Time tracking is inaccurate; there should be a reliable verification system"	M1: "การนับเวลาไม่แม่นยำ ควรมีระบบที่ตรวจสอบได้จริง"