# Blended Learning Design of English Language Course in Higher Education: A Systematic Review

Chen Yajie* and Nurul Farhana Binti Jumaat

***Abstract*—Higher education has been innovated by technological advancement to fulfill the demands of various learning needs. Blended Learning (BL) is increasingly important for education institutions to transform the conventional classroom into a more open and innovative integration of teaching and learning not limited to time and space. There have been literature and systematic review on BL in various subjects, however, BL design of English courses applied in higher education lacks a comprehensive systematic review. This paper conducts a systematic review of BL in English courses to investigate the effect of BL in ETL (English Teaching and Learning) and to identify BL trends, gaps, and future directions for ETL in higher education. Based on PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) guidelines, this study conducted a literature search of the following databases: Scopus, ACM, and Web of Science, using the search string of "blended learning", "English courses", and "higher education" and several related substrings. The search yielded 469 studies that were identified through further screening and eligibility. 69 articles were selected for inclusion in this review. The current research fields for BL in ETL can be mainly summarized into four categories: blended learning design, participants, technologies, and effects, The obtained findings identify the factors and variables related to BL that influence the effect of ETL in higher education. Additionally, the effectiveness of different BL models and approaches are investigated for ETL in higher education. The result facilitates the design and implementation of a blended or hybrid English course in higher education.**

***Index Terms*—English teaching and learning, blended learning, blended learning model, information and communications technology, higher education.**

## I. Introduction

Technology advancement in the Information Age has revolutionized the field of education. Higher education institutions must keep pace with the upgrading expectations related to the learning experience and the advancement of technological innovations. Blended Learning (BL) is one of the most widely used approaches to integrating Information and Communications Technology (ICT) into the education process. In its simplest definition, BL aims to combine face-to-face (F2F) and online settings, resulting in better learning engagement and flexible learning experiences, with rich settings way further the use of a simple online content repository to support the face-to-face classes [1]. This hybrid learning approach based on ICT offers new possibilities to design an innovative teaching model that effectively integrates resources and activities online and traditional classroom offline into dynamic and sustainable teaching and learning experience without limitation of time and space.

Therefore, researchers have focused on investigating different BL perspectives since 2000 [2], and this trend has been highly prompted regardless of the worldwide COVID-19 pandemic since 2020. While 22 years of research have been conducted on BL, there still exist several challenges and unanswered questions, among which, investigating different BL models with specific application domains to test their impacts on students' psychological and behavioral outcomes is still a significant task that future research might focus on [1]. Besides, blended teaching modes need to be based on the requirements of different courses [3].

Based on the above findings, it is necessary to conduct research on designing and investigating BL models in specific courses. Researchers on blended learning in English course has increased as researchers have looked for ways to utilize this educational model in English Teaching and Learning (ETL). Several review papers have investigated the outcomes and effects of using BL in ETL. The effective use of BL develops language skills, enhances the English learning environment, and promotes students' motivation toward learning the language [4]. Blended learning affects each of the integrated skills of the English language positively [5]. One recent review paper emphasized four trends in BL strategies, namely collaborative-based instruction, learning management systems, social media applications, and technology-based instruction [6]. However, reviews focusing on BL design are still scarce despite its significance in implementing BL. A review paper can help identify the models and approaches in BL designing practices. Therefore, it is still urgent to conduct reviews on designing and investigating BL models in teaching and learning English. This paper carried out a comprehensive systematic review of BL design for English courses in higher education to discuss teaching models in BL design and the other influencing variables of effective BL practice, serving to provide an overview of using BL in the ETL context.

## II. Methodology

The systematic review was conducted in accordance with PRISMA guidelines to identify relevant papers from three databases: Scopus, ACM, and Web of Science. Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) specifies a peer-reviewed and standard method that formulates a set of guideline items for systematic reviews and meta-analyses to ensure the quality and

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replicability of the review [7]. A review protocol was developed, describing the search strategy, eligibility criterion, data extraction, and data synthesis.

### A. Research Questions

The review questions were derived from an analysis of the previous studies and the necessity of future research. Specifically, the researcher has searched for reviews in the field of BL in ETL. It can be seen from the result that review papers with a focus on the BL design in ETL, especially the BL models used in English courses, are still inadequate in spite of their great importance in ETL practices. Besides, the variables that influence the effects of BL design need to be further identified. Therefore, this study is necessary to answer the following questions:

RQ1: What is the BL design applicable for English courses in higher education: models and approaches?

RQ2: What are the effects of BL in ETL: outcomes and influencing variables?

RQ3: What are the trends, gaps, and implications of BL research in English courses?

### B. Literature Search Strategy

A comprehensive search was conducted for relevant articles published between 2018 and 2022 in the following electronic databases: Scopus, ACM, and Web of Science, using the following search strings.

Search string: blended learning, English course, and higher education.

Blended learning substring: “blended learning” or “hybrid learning” or “mixed learning” or “HyFlex learning”.

English course substring: “English course” or “English teaching and learning”.

Higher education substring: “higher education” or “higher institutions” or “college” or “university”.

In this search process, as many relevant studies as possible were identified to address the research questions. It yielded 469 articles after removing the duplicates in each database.

### C. Eligibility Criterion

TABLE I: INCLUSION AND EXCLUSION CRITERIA

| Inclusion | Exclusion |
|---|---|
| Published studies from 2018-2022 | Not published from 2018-2022 |
| BL as a mode in English course only | BL as a mode but not in teaching and learning English only |
| BL as the main focus of study | BL not as the main focus of study (distance education-focused e-learning focused, online learning focused, ICT-based learning |
| BL as a mode in higher education | BL as a mode but not in higher education |
| Available as a full text | Not available as a full text |
| Articles written in English | Articles in other languages than English |

As shown in Table I, a set of inclusion and exclusion criteria were utilized to select appropriate studies and keep the review focused. The screening of titles and abstracts then excluded 245 papers from the total 469 ones. The remaining 224 papers were assessed for eligibility. 155 of the papers did not pass the inclusion criteria and 10 of them are duplicates. As a result, 69 research studies were selected for inclusion in this systematic review. An overview of the study selection process based on PRISMA is presented in Fig. 1.

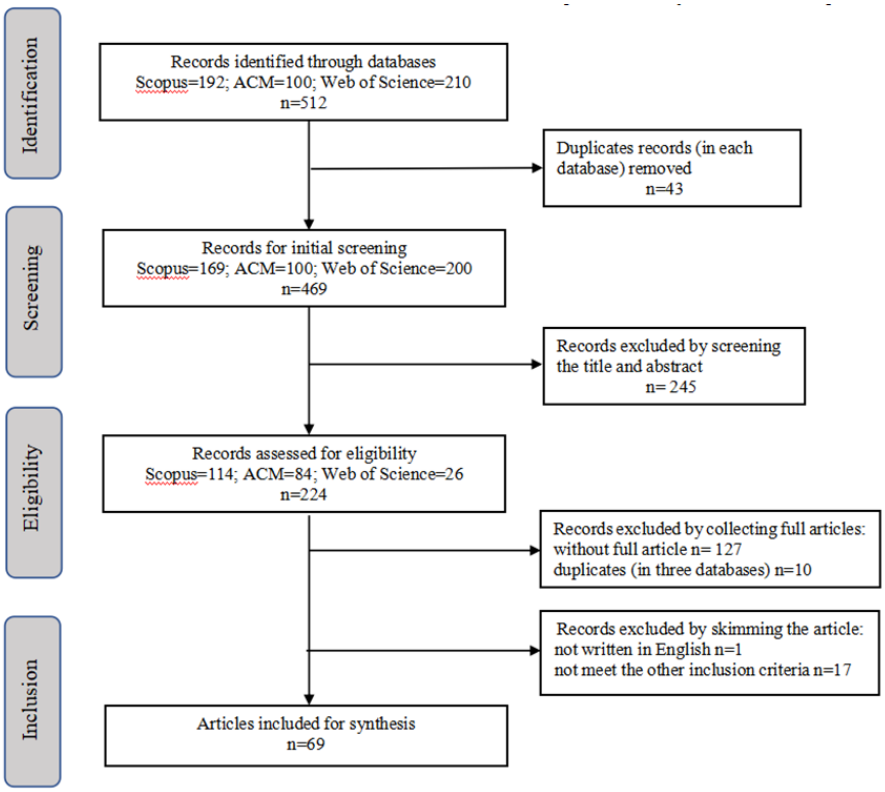


Fig. 1. PRISMA flowchart.

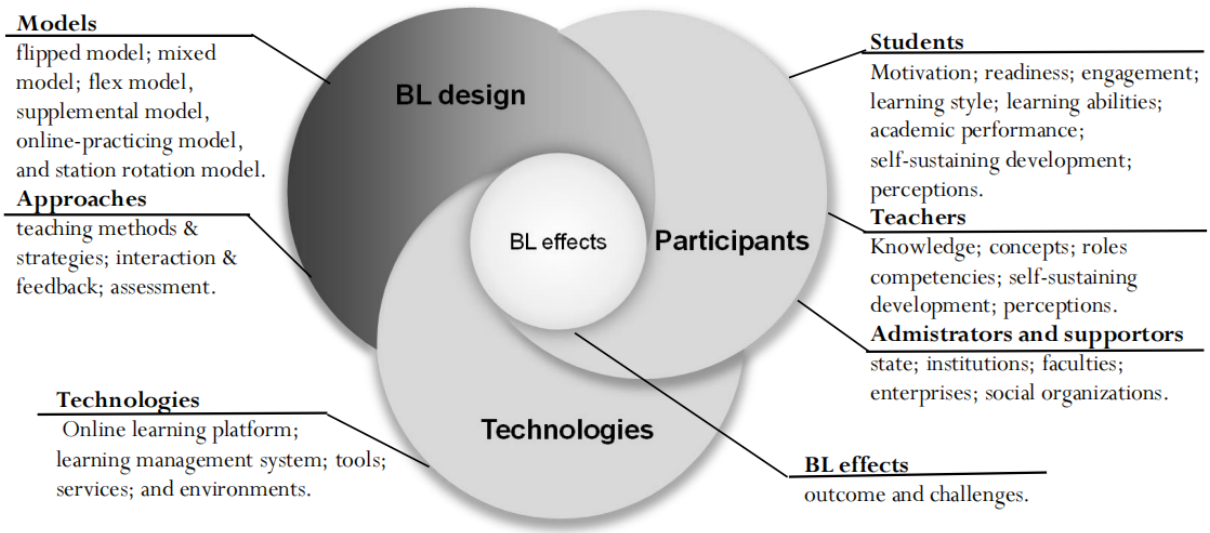


Fig. 2. Conceptual framework of BL and coding scheme.

### D. Data Extraction and Data Synthesis

A technology-based model applied in the BL field [8] was employed in this study. After adjustments to the ETC context, four factors were selected from this model to address the above-mentioned research questions. As shown in Fig. 2, BL design (the highlighted area of this review), participants, and technologies, these outer three factors, were identified as the variables that influence the center factor of BL effects. These four categories of factors overlap with each other, which explains the inner relationship between BL research fields in ETL. For instance, research on BL design may focus on exploring models and approaches according to various learning styles of the students [9] and investigate the BL effects on students' performance [10]. Research on students' learning ability in a BL environment may obtain results from the BL effects on students involved in a presented BL design [11]. Therefore, the research data in this review was not only collected according to the focus of each included paper but also extracted from every possible content in the paper to help ensure a relatively comprehensive synthesis.

## III. Results

### A. Year of Publication

Fig. 3 shows that the number of research on BL in ETL in higher institutions has increased gradually over the past five years except for the very beginning of 2022, at which this review was conducted. This indicates a growing need for BL in ETL, and an increasing number of researchers have shown their interest in this field. Especially in 2020 and 2021, the number of research is much higher than in previous years. This might be explained by the COVID-19 pandemic, which intensified the necessity to adopt a relatively flexible teaching mode without limitations of time and space. BL approach becomes the priority of educators to meet this end. Many institutions have developed and employed online learning management systems to guarantee a regular course schedule. It facilitates the BL research on English courses.

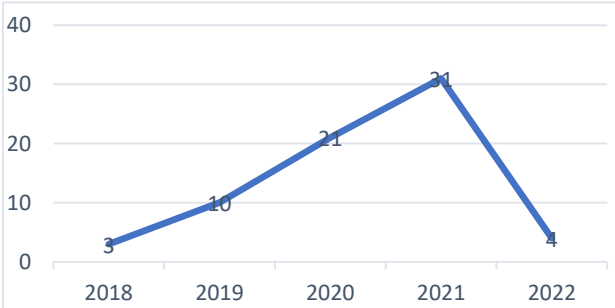


Fig. 3. Distribution by publication year.

### B. Participants

Based on the main research area, 19 papers [9, 11–28] were identified as the data in this review to analyze BL participants in ETL. As shown in Fig. 4, review studies primarily target students as participants. Only one paper focuses on the cultivation of qualified pre-service English teachers [28]. Administrators and supporters, such as the state, institutions, faculties, enterprises, and social organizations, which play vital roles in political, economic, technological, and social support, are neglected by researchers.

However, several review papers on other research areas indicate the leading impact of teachers in BL practice playing their role of guidance, inspiration, and control [29] as an organizer, conductor, helper [30], and collaborator [31]. Another paper on BL models concludes that teachers' effective teaching behavior in College English teaching can be summarized into five factors: online learning management, teacher support, organizing the face-to-face classroom, diversified evaluation, and personalized teaching [32].

Research on students' minds and behaviors can be divided into three categories according to the learning procedure. As shown in Fig. 5, the characters in the in-learning stage ($n$=8) receive the most attention, closely followed by the post-learning stage ($n$=7), and then the pre-learning stage ($n$=3). Among these characters, students' perception of BL design is most targeted, followed by students' autonomous learning ability and their motivation

and readiness to learn English in the BL environment. It should be noted that although there is no research mainly focused on students' academic performance, BL design in many papers [12, 13, 33], etc. have produced a better academic performance in ETL.

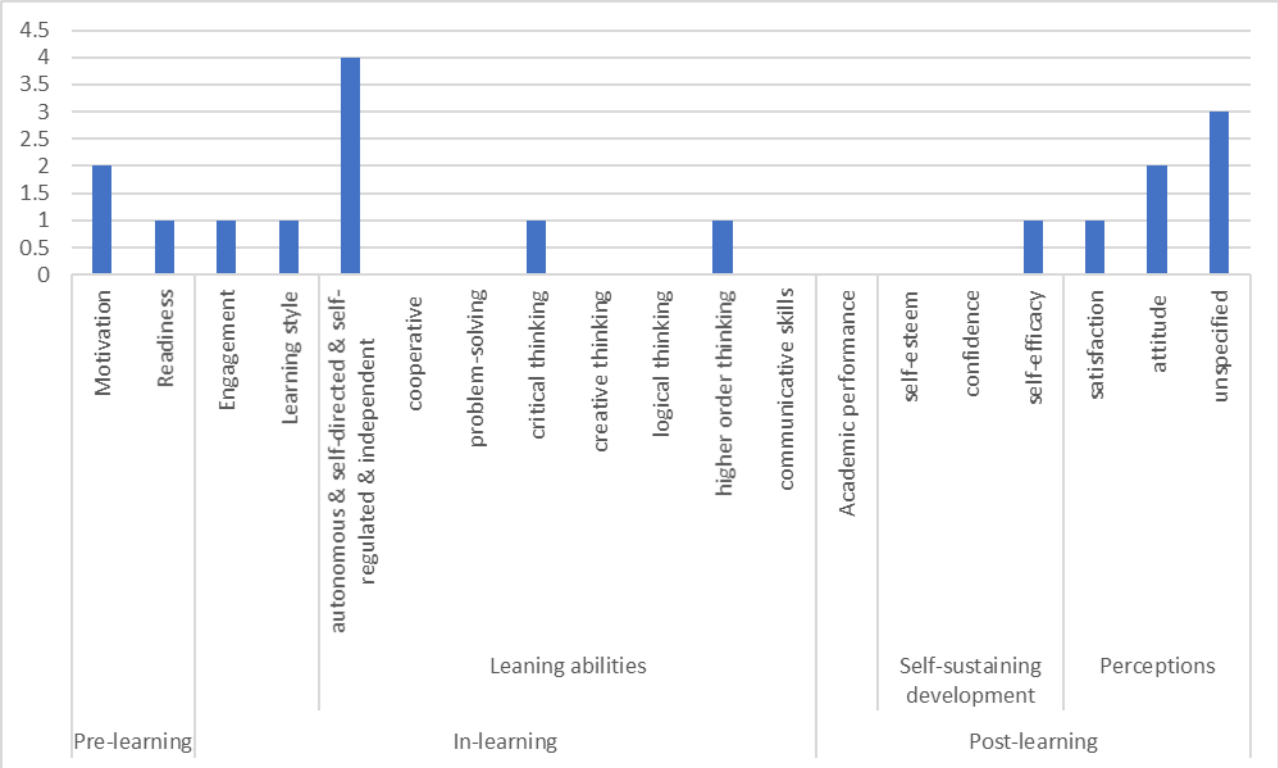


Fig. 4. Distribution of research on students.

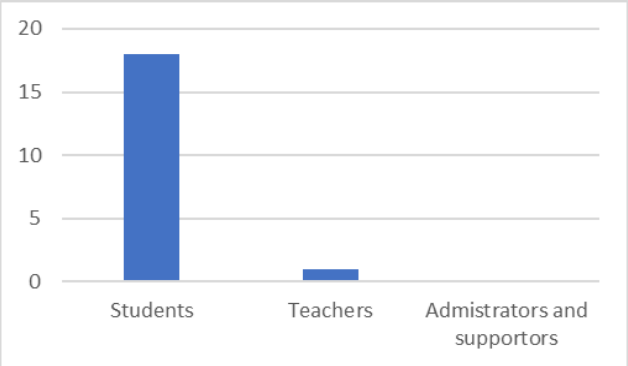


Fig. 5. Distribution of research on participants.

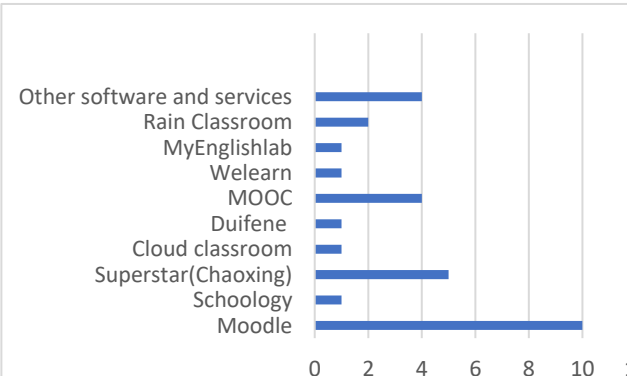


Fig. 6. Frequency of online learning platforms.

### C. Technologies

An efficient online learning platform or management system forms the technological base of BL practices. It creates a dynamic environment for both teachers and students to develop resources, exchange information, conduct activities, and participate in assessments. As shown in Fig. 6, Moodle is the most used platform for BL in ETL. Both students and instructors show positive attitudes about learning English via Moodle. It facilitates student-centered learning, makes course administration easier, reduces the time of delivering instructions, and encourages students' motivation [13]. Superstar (Chaoxing) platform stands in second place. It is a priority for most English teachers in China [33–38], etc. Some teachers use online resources on MOOC, and conduct activities in Superstar [39]. Besides, many other social software and services, such as Facebook, Weibo, QQ, Wechat, BBS, blogs, and video conference software assist the BL practices in ETL.

Several papers focus on some technological tools used in ETL: data mining algorithms for teaching and evaluation [40, 41], corpus-based teaching mode [42], and Transparent Language Online in basic English courses [43].

Additionally, one article identifies the challenges that students and teachers face with technological use in BL environments: technology proficiency and competency challenges, technological insufficiency, and technological operation complexity [44].

### D. BL Design

For BL design of English courses, three parts are identified as the basic elements: front-end analysis, activity, and resource design, and evaluation design. Front-end analysis includes teaching information collection and teaching decision-making [36]. Teachers should gather and analyze the course aims and learning objectives, course

textbook and learning contents, course plan and learning schedule, and learners' characteristics, as well as choosing teaching models and approaches, online learning platforms, and teaching and learning assisting tools. Activity and resource design can be divided into three categories: learning-task end, interaction end, and reflection end. Evaluation design involves evaluating methods, activities, and technologies.

Models and approach selection stand at the center of BL design. According to the intensity and impact of online practices, BL models in ETL have been divided into three groups:

Low-impact blending: no language teaching content online; only some resources, practices, or extra activities online.

Medium-impact blending: some of or all of the language teaching content online; some learning activities online.

High-impact blending: all of the language teaching content and learning activities online.

As shown in Fig. 7, of the 38 papers identified for BL models, 30 choose the medium-impact blending models. Flipped model is the most frequently used BL model for ETL in higher education. In this model, the teaching content of language skills occurs outside of the classroom through online resources before class, and in-class time mainly focuses on active language learning tasks and language communication practices. Then exercises, evaluations, or reflections are completed after class. This teaching and learning approach allows language learners to realize a balance between language learning and language practice, making more room for using language in real situations. It fits the aim of most language courses. In a flipped model, language learning practice gets through three stages, namely pre-class knowledge transfer, in-class internalization improvement, and post-class out presentation and production [39, 45, 46]. In the pre-class stage, students can independently preview both the instructional and content materials online [16], such as micro-lesson videos, targeted language exercises, and forum discussions [47], [48], to trigger their ideas on the spoken topic [16] and get prepared for learning new linguistics. In class students can display their learning achievements, apply language knowledge and explore solutions to difficult language points by giving English presentations or topic speeches in group work, conducting group tasks or group discussions, etc. [47], [48]. Extracurricular projects, summaries, and feedback are carried out for consolidation and evaluation of language learning in the post-class stage [47, 48]. During the above process, online and offline are smoothly connected. The pre-class autonomous learning stage, in-class communication and discussion stage, and after-class training stage have mutually interacted [10, 34], which integrates autonomous learning, interactive learning, and cooperative learning [10], [49], successfully building an online community and social interaction that provides the framework for achieving educational sustainability [50]. Students had a positive perception of the implementation of the flipped model in terms of self-directed learning [16]. For one thing, in online teaching, students can choose to learn materials according to their own needs and seek immediate help through convenient communication with their teachers, thus considerably motivating their learning enthusiasm, and improving their autonomous learning ability and engagement with the materials [16, 33]. For another, in offline teaching, more opportunities are offered for the students to show their learning results, which helps strengthen their language skills and shows their dominant role in class as well [33, 51]. The experimental results of implementing flipped model show that it enhances students' performance in innovation ability, individualized learning ability, team cooperation ability, language application ability, logical thinking ability, and cultural literacy ability [10].

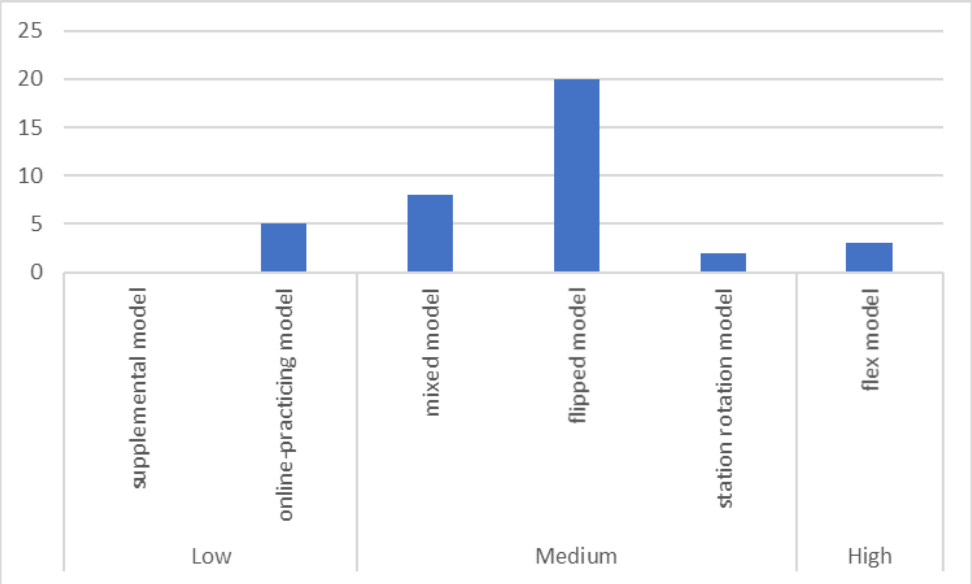


Fig. 7. Frequency of BL models used in ETL in higher education.

The second most used model is the mixed model. In this model, language content teaching and learning activities take place both face-to-face and online. Compared with the flipped model, face-to-face time can focus on both language

skills teaching and practical learning activities. Teachers use a mix of classroom deliveries and online materials for language content teaching. This model best fits the real learning situation where some difficult language points must be analyzed by teachers and not all students can discipline themselves to view the online teaching content before class. It combines the advantages of face-to-face classroom teaching and online learning while avoiding the problems of both ones. The mixed mode requires students to mix online learning with offline learning, autonomous learning with collaborative learning, fragmented learning with concentrated learning, virtual learning with hands-on practice, and self-study with teacher guidance [29, 52]. While the flipped model highlights language practice, the mixed model highlights both language teaching and language practice, which effectively integrates online teaching and offline teaching, thus realizing the optimization of the teaching effect [29].

Another medium-impact BL model is the station rotation model. In this model, the student can rotate through online and offline stations on a fixed or unfixed schedule [1]. One example of using this model was identified in this review. The course adopts a "Practice Reflection" to "Re-Practice and Re-reflection" approach with a combination of the first class (traditional classroom activities), the second class (online course), and the third class (extracurricular practice) [38].

Low-impact blending models include online-practicing and supplemental models. In the online-practicing model, students are involved to do exercises, tests, peer evaluations [13, 18, 24, 25] and interactive practices [53] online and are provided with immediate feedback. In the supplemental model, in order to better engage and facilitate students' learning, some online activities are supplemented to the course. These activities can be both with or without relation to the in-class activities.

The flex model is a high-impact blending model. In this model, both lectures and activities are conducted online, and face-to-face meetings only occur when necessary to allow periodical checks and feedback. A common way to implement this model is by building a complete online course from scratch [11, 32].

To be highly mentioned, of all the identified models in this review, only the flipped model is nominated by the researchers, other models are not mentioned by using their academic names although the authors have adopted them in their research. Besides, only a few studies are supported by educational theories and methodologies, including Constructivist Theory [51, 52, 54] Humanism [52], Cognitivist [52], Vygotsky Theory [24], POA [39, 55], PBL [24], etc.

### *E. Effects*

Large numbers of research studies investigated the use and the effects of BL in the ETL context. The efficiency and benefits of BL in the ETL context have been identified from the following perspectives: students, teachers, and organizations. BL is introduced to the regular college-level curriculum as a strategy to provide sufficient learning hours, this approach may lead to students' active learning and sustained language development [53]. BL has a substantial influence on students' learning achievements and improvements [30]. Blended teaching focuses on cultivating students' logical thinking ability, critical thinking ability, problem-solving ability, creative and innovative ability, communication and coordination ability, cooperation ability, etc. [29]. Blended teaching reform can not only fully reflect the students as the main body of the learning process, give full play to their autonomy, enthusiasm, and creativity, but also embody the teacher as the leading role in the teaching process, playing its role of guidance, inspiration, and control [29]. This greatly reduces the burden of teachers' lesson preparation, but also enriches the teaching dimension and improves teaching efficiency [35]. The construction of a blended learning model provides an effective interaction and resource platform for teachers and students. Teachers' online teaching and students' online learning form a dynamic learning ecosystem with the network [56]. Since the BL mode is supported by some technological resources, it enables faculty to develop courses to meet the ever-changing interests and needs of modern web-conscious and internet-minded students [57]. It integrates various teaching resources, improves the efficiency of resource utilization and learning, and is a major structural change supported by technology in the education system [42].

In addition, many researchers have conducted explorations of using BL on various language skills, such as reading [16], writing [27, 36, 54, 58, 59] listening [18, 52], speaking [60], and translation [47, 60–62]. Among these, flipped classroom teaching model improved students' critical thinking in reading skills specifically in accuracy, clarity, precision, depth, relevance, and logic [16]. The teaching model within BL mode can significantly improve students' English writing ability in terms of four aspects: content relevance, content sufficiency, organization structure, and language expression [59]. The blended teaching mode of PADD class (Presentation- Assimilation-Discussion- Dialogue) stimulates students' learning initiative and improves the teaching quality of the English listening course [52]. With the use of Facebook in a BL environment, students' English pronunciation competence was dramatically improved. Facebook retains outstanding features to offer a professional online course for English pronunciation learning, such as live lectures, group discussions, scheduled events and etc. [63]. Besides, English translation concepts teaching in a BL setting enhances the core concept building and mythical concept transformation in translation concepts teaching practices [61].

However, as shown in Fig. 8, most of the studies didn't demonstrate the BL effects on specific language skills. Therefore, BL design on each language skill is suggested for future research.

## IV. Discussions

The first research question examines the models and approaches appropriate for English courses in higher education. It helps fill the research gap in BL reviews in ETL. The results reveal that mainly six blended teaching

models are applied in ETL in higher institutions, namely flipped model, mixed model, station rotation model, online-practicing model, supplemental model, and flex model. These models are classified into high-impact models, medium-impact models, and low-impact models according to their intensity and impact of online practices. Nearly 80 percent of the selected studies choose medium-impact models, among which, flipped model and mixed model are the two most frequently used models. The fundamental difference between these two models lies in that whether language content teaching occurs in face-to-face class time. While most previous studies only highlight the significance of flipped model as can be seen from the search result, this study begins to pay attention to the mixed model. As in the mixed model, teachers can choose to deliver language knowledge when necessary, no matter whether it is online or offline. This better fits real language teaching and learning situations. Besides, it balances language teaching and language practice, and optimizes the priorities of both online and face-to-face learning, thus facilitating a more effective and sustainable BL design in ETL. However, both the flipped model and the mixed model prove to be effective and significant in developing students' autonomous learning, interactive learning, and collaborative learning. Furthermore, teaching modes and approaches also need to be developed and updated with the advancing era.

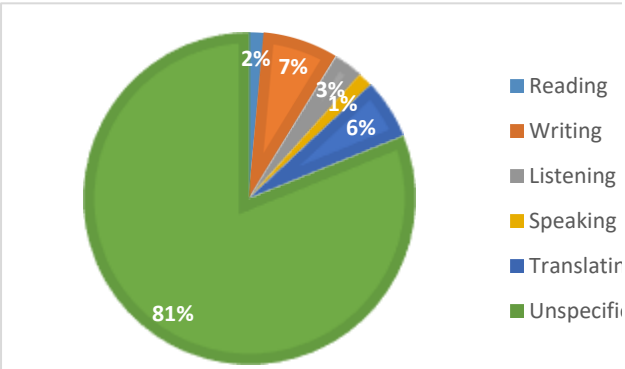


Fig. 8. Distribution of BL use in language skills.

In the second research question, the outcome and effects of BL in ETL are displayed in two ways. One is discussed from the perspective of the participants, including students, teachers, and institutions. The other puts focus on various basic language skills, such as reading, writing, listening, speaking, and translation. The remarkable contribution of this research on this question is that the variables influencing the effects of BL are identified as BL design, participants, and technologies. And their interrelationship is further examined. This technology-based model centered on BL effects provides a conceptual framework to conduct future research on BL.

As to the third research question, future directions and educational implications based on the trend and gap in this field are presented. It can be seen from the results that in spite of the increasing number of research on BL in ETL, especially since the epidemic in 2019, the depth and breadth of the research need to be further improved. For one thing, research on BL designs in English courses still lacks theoretical support due to ignorance of knowledge and awareness of using BL models and pedagogical theory-based methodologies. Research on BL model design based on different methodologies and approaches is highly recommended for future studies. And comparison on the effects and teaching approaches of different BL models in ETL practices needs to be further explored. For another, research on the outcome and effects of BL in ETL are mainly focused on the perspective of students in their pre-learning, in-learning and post-learning stages. More BL research targeted on other participants need to be conducted to identify the concepts, roles and competencies of the teachers and the functions of administrators and other supporters. Besides, studies on specific language skills in BL are still inadequate.

The main limitation of the study is the quantity and quality of previous studies, which may diminish the statistical significance. Exhaustive search and critical assessment of more relevant studies are considered.

## V. Conclusion

This study conducted a systematic review of BL in English courses in higher institutions. Each research question was addressed by several findings: 1) an increasing number of research on this topic over the past five years indicates a growing demand for BL in ETL; 2) BL proves to be effective, efficient, and beneficial in ETL practice. The effect of BL depends on the following three variables: BL design, participants, and technologies; 3) the most known and used BL model in ETL research is the flipped model, while the mixed model tends to be more practical in real ETL circumstances. The above findings of this study can help create a framework for investigating BL effects in the future and facilitates the BL implementation in ETL in higher education. Possible future research topics in this field are as follows: 1) BL design based on theoretical methodologies; 2) Comparison of applicable BL models and approaches in ETL practices; 3) BL in ETL from the perspective of teachers and administrators; 4) BL design on specific language skills.

## Conflict of Interest

The authors declare no conflict of interest.

## Author Contributions

Chen Yajie and Nurul Farhana Binti Jumaat conducted the research, analyzed the data, and wrote the paper together; Nurul Farhana Binti Jumaat gave guidance on the conceptual research. All authors had approved the final version.

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