

Systematic Literature Review on Basic Psychological Needs in Blended Learning for English Language Teaching

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Draft article history
Submitted: 12-08-2025;
Revised: 02-04-2026;
Accepted: 02-11-2026;

ABSTRACT: This study aims to conduct a literature review on basic psychological needs in blended learning for English language teaching. This study applied a Systematic Literature Review (SLR) which incorporates the results of related studies using scientific and systematic method. The Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) statement was utilised to conduct the review. The review draws on eight articles published between years of 2016 and 2025 from credible sources, including Scopus, EBSCOhost, and Google Scholar. The research outcomes reveal that autonomy needs are consistently satisfied through blended learning, whereas relatedness and competence needs are fulfilled conditionally, meaning that requirements such as supportive feedback and an appropriate level of exercise must be met to fulfil those needs. Then, two patterns were found; autonomy is consistently reported as the easiest need to fulfil, while competence and relatedness are more contextual needs that depend on pedagogical scaffolding, the quality of teachers' feedback, and opportunities for meaningful social interaction. Further, the research trends indicate that most studies aimed to evaluate the effectiveness of blended English learning on motivation and learning outcomes, explore the fulfilment of BPNs, and extend the Self-Determination Theory (SDT) framework. Methodologically, mixed-methods approaches were primarily employed, notably the sequential explanatory design, with questionnaires as the most frequently used instruments. A large number of studies involve undergraduate students in Asian settings. This review contributes theoretically by affirming that SDT and BPNs are key components of a conceptual framework for explaining how BL influences motivation and achievement, and practically by directing ELT practices toward a more psychological-pedagogical approach that integrates teaching methodology and students' psychological conditions.

Keywords: basic psychological needs, blended learning, English language teaching, systematic literature review.

ABSTRAK: Studi ini bertujuan untuk melakukan kajian literatur tentang kebutuhan psikologis dasar dalam pembelajaran Bahasa Inggris. Studi ini menggunakan Systematic Literature Review (SLR) yang menggabungkan hasil studi terkait menggunakan metode ilmiah dan sistematis. Untuk melakukan kajian, penulis menggunakan The Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA). Review dilakukan pada delapan artikel yang diterbitkan pada tahun 2016-2025 dari berbagai sumber yang terpercaya seperti Scopus, EBSCOhost, dan Google Scholar. Hasil studi menunjukkan bahwa kebutuhan otonomi secara konsisten dipenuhi secara memuaskan melalui blended learning, sedangkan kebutuhan keterkaitan dan kompetensi terpenuhi secara kondisional, yang artinya kebutuhan tersebut akan terpenuhi jika umpan balik yang mendukung dan latihan yang sesuai level juga terlaksanakan dengan baik. Selain itu, dua pola juga ditemukan; otonomi secara konsisten dilaporkan sebagai kebutuhan yang paling mudah dipenuhi, sedangkan kompetensi dan keterkaitan adalah

kebutuhan yang lebih kontekstual tergantung pada scaffolding pedagogic, kualitas umpan balik guru, dan kesempatan berinteraksi sosial yang bermakna. Lebih lanjut, tren penelitian menunjukkan bahwa kebanyakan studi adalah mengevaluasi efektivitas pembelajaran blended Bahasa Inggris yang dikaitkan dengan motivasi dan hasil pembelajaran, mengeksplor keterpunhan kebutuhan psikologis dasar (BPNs) dan perluasan framework Self-determination theory (SDT). Secara metodologis, pendekatan mixed-method paling sering digunakan dengan desain eksplanatori sekuensial, dan kuosiner sebagai instrumen yang paling sering disunakan. Siswa yang terlibat semuanya di kawasan Asia. Kajian ini memberikan kontribusi teoritis yang menegaskan bahwa SDT dan BPNs adalah komponen kunci dari kerangka konseptual untuk menjelaskan bagaimana pembelajaran bauran mempengaruhi motivasi dan prestasi, dan secara praktis memberikan kontribusi dengan cara mengarahkan praktik pembelajaran Bahasa Inggris menggunakan pendekatan pedagogisi-psikologis yang mengintegrasikan metode pengajaran dan kondisi psikologis siswa.

Kata kunci: *kebutuhan psikologis dasar, pembelajaran bauran, pengajaran bahasa Inggris, tinjauan pustaka sistematis.*

INTRODUCTION

Blended learning (BL) or hybrid learning (HL) represents a novel paradigm for instruction that incorporates the best parts of face-to-face instruction and online learning (Yu & Du, 2019) using virtual classrooms, online training and other web-based study materials (Polat et al., 2021). It is an excellent path to fulfil the different needs of learners, as it combines digital technologies with traditional classroom settings. In this mixed setting, students have the opportunity to engage with knowledge in both autonomous and interactive ways. This could allow a wider variety of teaching strategies to be employed, which may be better suited to different learning styles (Bernard et al., 2014). There is a growing consensus that educational technology, in a general sense, is any tool or resource that helps teachers, students, and creative thinkers learn and teach better (Johnson et al., 2016). Moreover, information technology is a fundamental element in education, enhancing teachers' interactivity and assisting in the design and administration of adaptable curricula (Wicaksono et al., 2024).

As predicted by the New Media Consortium (NMC) and the Educause Learning Initiative (ELI) in 2016, based on trends observed during that period, the redesign of learning spaces to incorporate both face-to-face teaching and online teaching into the 'flip classroom' model is expected to occur by the end of 2019. The prediction was subsequently corroborated by subsequent events; the transition towards remote learning, precipitated by the exigencies of the global Coronavirus pandemic, had indeed materialised. Although teachers and students do not have sufficient preparation, the massive shift from online to BL was unavoidable; therefore, encouraging all stakeholders to adapt to a new approach of teaching and learning (Jyothi et al., 2020; Yuan et al., 2022). Furthermore, there was a substantial growth in the overall amount of research on blended learning in 2020, when the first worldwide spread of COVID-19 (Dai et al., 2023).

In the ELT setting, BL has both beneficial and detrimental effects. Numerous challenges should also be tackled to implement this approach. The beneficial effects include improving the classroom atmosphere, making it more engaging and motivating for students. Meanwhile, the detrimental effects include

significant confusion about the use of BL, demotivation, and putting students in an awkward situation (Faatihah et al., 2024). This BL approach poses some challenges that need to be addressed. Firstly, for students, it is time-consuming because they need more time and effort to work on both models. Secondly, it produces an overwhelming amount of information. Thirdly, teachers also need to spend more time and energy learning how to adjust to blended learning (Foley & Curtin, 2022).

These massive shifts from offline to online and subsequently to BL may affect the fulfilment of teachers' and students' basic psychological needs (BPNs). The core components of BPNs, such as autonomy, competence, and relatedness, are essential for maintaining students' intrinsic motivation and enthusiasm for learning. Whenever these core needs are well met, students will have a greater chance of achieving academically (Deci & Ryan, 2000). Autonomy implies the feeling of freedom to choose, competence refers to the sense of being able to do something required, and relatedness describes the feeling of meaningful relationships with others (Van der Kaap-Deeder et al., 2020).

BPN theory has a powerful impact on human development, especially in educational settings. It is worth noting that schools are able to offer an atmosphere in which basic psychological needs can grow and achieve success (Ryan & Deci, 2020; Wong, 2019). Studies about BPNs have been achieving attention at schools and other educational settings, as it is able to be implemented in any aim, such as investigating students' engagement in school with an emphasis on agency and justice (Molinari & Mameli, 2018), classifying give-and-take social bonds among students in primary school (Wang et al., 2019), and comparing the basic psychological needs of students prior to and after the COVID-19 pandemic (Müller et al., 2021).

However, none of the studies above are integrated with ELT. ELT needs more attention in blended learning as its characteristics emphasise interaction and communication. In addition, ELT focuses on developing communicative competence, which requires active involvement, continuous feedback, and affective support. Besides, ELT often includes language anxiety, fear of making mistakes and errors, and low self-confidence. Thus, the fulfilment of BPNs is a crucial aspect of ELT blended learning and has pedagogical implications.

Previous studies, including systematic literature reviews, have already explored the implementation of BL in the ELT context (Gayatri et al., 2022; Ramalingam et al., 2022). However, these studies indicated the limitations in synthesising comprehensive results, especially in incorporating BPNs in BL and ELT context. Therefore, the purpose of this study is to do a systematic literature review and analyse existing research in English Language Teaching (ELT) that focuses on blended learning and basic psychological needs (BPNs), as well as to consider potential methodological directions for future research in this area. In light of the aforementioned objective, this study poses the following research questions.

1. What patterns and implications of the previous studies regarding the basic psychological needs in blended learning of ELT?

2. What recent trends emerged in the basic psychological needs in blended learning of ELT?
3. What gaps can be drawn from the reviewed articles in terms of basic psychological needs in blended learning of ELT?

RESEARCH METHOD

This current study explicitly applied a systematic literature review (SLR). It is a systematic review that combines the findings of relevant studies using scientific and systematic methods (Lestiono & Lee, 2024). The main analytical purpose is to do a thematic synthesis on the empirical findings. Thus, it is not intended as a scoping review or systematic mapping review. In addition, it provides transparent, comprehensive, and accurate information on the reasons for conducting the review, the way the review is conducted, and its results (Page et al., 2021). To help the authors report the reviews transparently, the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) statement was utilised. PRISMA offers a standardised methodology that contributes to the quality assurance of the revision and application process, ensuring consistency and reliability (Tedja et al., 2024).

Sources of Data

The current study generates articles from various sources and databases, including Scopus, EBSCOhost. They were chosen for providing credible and extensive articles that are also accessible. Google Scholar was also used to broaden the scope and explore more related articles by applying strict quality control, inclusion criteria and a multi-stage selection procedure. The articles were published from 2016 until June 2025 by journals that apply peer-reviewed articles, as they had already met the criteria to produce high-quality articles. Peer review is to ensure that the author has conducted the research well and that the report or article is credible (Sestras, 2021; Tumin & Tobias, 2019).

Inclusion and Exclusion Criteria

Inclusion and exclusion criteria must be clearly defined to screen and identify relevant articles systematically. The first inclusion is peer-reviewed journal articles, while those that are non-peer-reviewed articles, such as conference proceedings, book chapters, and book reviews, are excluded. The second inclusion criterion is articles published between June 2016 and 2025, while publications before 2016 were excluded. This period was chosen because it spanned 4-5 years before and after COVID-19, making it suitable for comparing blended learning before and after the pandemic. The third inclusion criterion is English-written articles, while non-English-written articles are excluded. They are excluded to ensure the conceptual consistency and accuracy of interpretation, especially on the primary terms used such as self-determination theory and basic psychological needs. Besides, most reputable journals and references are written in English and are understandable to the authors. The fourth inclusion criterion is articles that

are both full-text and open access, while abstracts only are excluded because they cannot provide the detailed and comprehensive analysis required. The last inclusion criterion is that the article or research should encompass three key aspects: BPNs, blended learning, and the teaching and learning of English simultaneously. Articles that cover only two or one of these aspects will be excluded, as they cannot adequately describe BPNs within an English blended learning context. The resume of the inclusion and exclusion criteria is presented in Table 1.

Table 1. Inclusion and Exclusion Criteria of the Reviewed Articles

Inclusion criteria	Exclusion criteria
Peer-reviewed journal articles	Conference proceedings, book chapters, and other non-peer-reviewed articles
Published in 2016-2025	Published before 2016
Written in English	Non-English-written articles
Available in both full text and open access	Abstract only
The research involves three aspects: BPNs, blended learning, and teaching and learning English.	The research is missing one of the three aspects, such as BPNs, blended learning, and teaching and learning English.

Searching Strategy

Referring to the aim of this study, which is to identify and examine the existing research in the field of English Language Teaching and learning, which is incorporated into blended learning and basic psychological needs (BPNs), the keywords inputted in the title, abstract, and keywords search of databases are as follows:

("English language teaching" or "English language learning")
AND ("Basic psychological needs")
AND ("Blended learning" OR "Hybrid learning" OR "Flipped learning")

After searching articles in the databases, the authors conducted an analysis using the PRISMA method, adopted from the Diagram Flow of Haddaway et al. (Haddaway et al., 2022) as shown in Figure 1. The selection and analysis process involved two reviewers. Those two reviewers screened the titles and abstracts of articles and continued to refer to the full text using the stipulated inclusion and exclusion criteria. To maintain reliability, the reviewers' differing opinions on the assessment should be discussed to reach an agreement. If the agreement is not achieved, the third reviewer is involved to solve the disagreement. However, this study did not involve the third reviewer because the two reviewers had reached an agreement. Quality appraisal was used to assess the accuracy of the methodology, given that the main aim of this research was thematic synthesis rather than effect assessment.

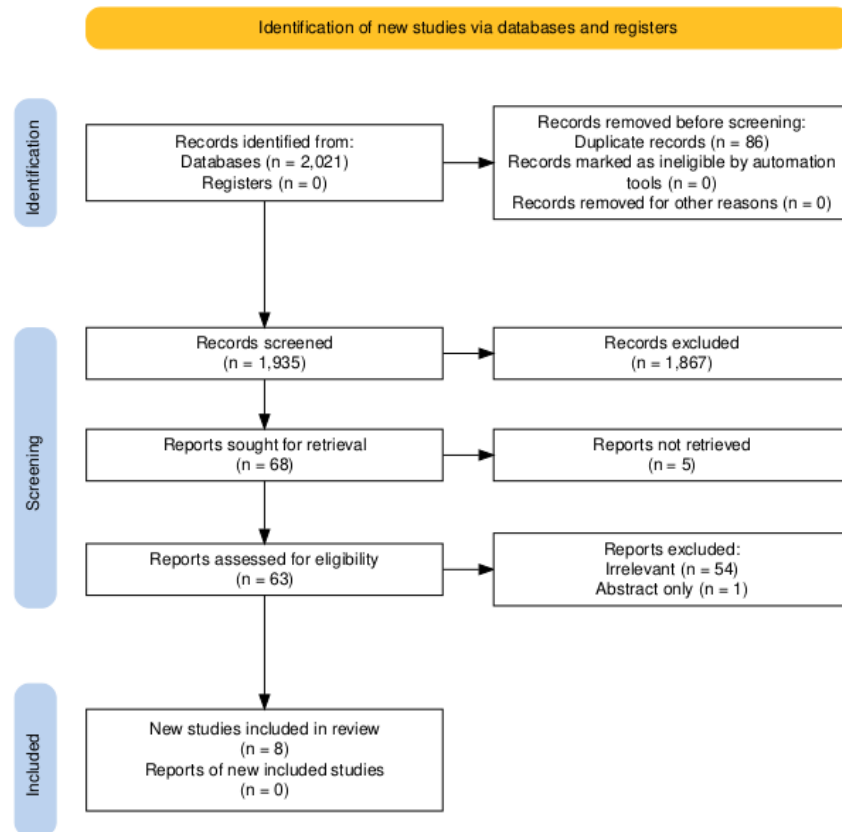


Figure 1. Results from the Search and Selection Process (PRISMA Flow Diagram)

Figure 1 shows 2021 articles found using the stated keywords. However, 86 articles were duplicates. In the screening process, using the inclusion and exclusion criteria, eight articles were found that are eligible for review.

RESULT AND DISCUSSION

Research Questions 1: Patterns & Implications

After analysing the available data using PRISMA, eight articles were identified on the topic of basic psychological needs in blended learning in ELT, as shown in Table 2. The research outcomes of the eight articles are presented in order of publication year. Among eight articles, six were published by Scopus journals, and two articles were published by journals indexed by Malaysian Citation Centre and Ministry of Science of Iran.

Table 2. List of Reviewed Articles

Article	Author (year)	Title
1	Banditvilai (2016)	Enhancing Students' Language Skills through Blended Learning
2	Wong (2019)	Basis psychological needs of students in blended learning
3	Wong (2020)	When no one can go to school: does online learning meet students' basic learning needs?

4	Arifani et al. (2021)	Basic psychological needs of in-service EFL teachers in blended professional training: voices of teachers and learners
5	Aldaghri (2024)	Incorporating Flipped Model in Learning English Grammar: Exploring EFL Students' Intrinsic Motivation and Attainment
6	Labbafi et al. (2025)	The Impact of Synchronous, Asynchronous, and Hybrid Learning Models on the Self-Determined Motivation of EFL Learners: Investigating Learner Perceptions
7	Wu et al. (2025)	CAR-SCT Blended Learning Framework: Boosting EFL Proficiency in Chinese Primary Schools
8	Yang et al. (2025)	Variable-and person-centered approaches to teacher support and learning satisfaction in blended English learning: the role of SDT motivation and learning engagement

The study conducted by Banditvilai demonstrated that e-learning substantially improved students' language proficiency, as indicated by a considerable rise in the mean scores of the experimental group. Students had positive feelings about using e-learning as an additional tool. They said it was motivating and effective for improving all four language skills: listening, speaking, reading, and writing. Some, on the other hand, thought the program did not give them enough chances to speak. Semi-structured interviews showed that students liked e-learning more than traditional classroom techniques because it was more flexible and engaging. In general, e-learning was thought to be a helpful and successful addition to in-class learning (Banditvilai, 2016). This finding, however, relates to autonomy: students will have greater autonomy when they engage in self-regulated learning, especially online. Regarding relatedness, blended learning, especially in offline mode, can maintain the relationships and emotions between students and teachers, whereas online learning cannot replace this role. But the competence is not addressed in these findings.

Wong revealed that there is a positive relationship among the three fundamental psychological needs. The concepts of relatedness and competence regarding students' basic psychological needs were satisfied in the current context of blended learning. The current school culture, assessment practices, and the habitual adherence to conventional roles by both teachers and students are not fulfilling the need for autonomy. Results indicated that the fundamental psychological need for autonomy could be satisfied through modifications to specific contextual variables. The findings of this study indicate that the three fundamental psychological needs are interconnected. Blended learning introduces an innovative form of interaction that accommodates diverse learning styles among students. Students' social interactions extended beyond the confines of the classroom (Wong, 2019).

Wong observed that online learning only partially met the basic educational needs of learners. It promoted autonomy and competence through individual learning and a sense of achievement; yet, it did not satisfy the criteria for relatedness and arousal, as there was insufficient social and physical connection with teachers and peers in a conventional classroom setting (Wong, 2020).

Arifani et al. discovered that there is no significant difference between the opinions of in-service teachers and learners regarding the in-service teachers' BPN. Learners perceived that the in-service teachers' fulfilment of relatedness and competence was inadequate in facilitating connections with others through IT, online care, online teachers' ornamentation, and the acquisition of new abilities. The interview with both groups of participants revealed that learners were unhappy with their in-service teachers' BPN of relatedness, as it did not provide sufficient online care, empathy, or assistance with numerous online assignments (Arifani et al., 2021).

Aldaghri found that the flipped-classroom as a part of blended learning enhances students' intrinsic motivation for learning grammar by creating a student-centred, supportive, positive, and collaborative technology-based environment that fosters language acquisition and fulfils their basic psychological needs for autonomy, competence, and connection (Aldaghri, 2024). At the same time, these designs can fulfil students' needs for autonomy, competence, and relatedness. Autonomy is achieved by giving students control over their time and learning materials, thereby encouraging self-regulated learning. Competence will also be developed through classroom activities that are applicable and provide continuous feedback. Relatedness is reinforced through collaborative interaction and intensive communication with teachers and peers, which build supportive learning environment.

Labbafi et al. revealed that the hybrid learning model produced the highest post-test motivation levels among EFL learners, followed by the synchronous model. On the contrary, the poorest score was generated by the experimental group of the asynchronous. In addition, the results of the qualitative inquiry indicated three main factors that could improve motivation: greater engagement, increased learning flexibility, and improved self-discipline. In short, the Tukey's HSD analysis demonstrated a clear hierarchy of effectiveness, with the hybrid model outperforming the synchronous approach, which in turn showed substantially stronger results than the asynchronous model (Labbafi et al., 2025). The findings also indicated that autonomy is fulfilled through flexibility and self-paced learning (asynchronous); competence and relatedness are reinforced through direct interaction, feedback, and social collaboration.

Wu et al. developed the CAR-SCT blended learning framework, which represents significant progress in addressing the unique difficulties faced by low-proficiency EFL learners in Chinese primary school. The combination of SDT, SCT, and a blended learning framework creates a new and comprehensive approach to language teaching. After the addition of personalised online exercises, students showed a 30% improvement in the speed at which they learned new words. In

addition, peer role-play sessions improved speaking fluency by 25% (Wu et al., 2025). This framework is closely related to autonomy and relatedness but has weak relationships with competence.

Yang et al., indicated that Self Determination Theory (SDT) motivation and learning engagement served as effective mediators in blended English learning, establishing a robust intermediary link between teacher support and learning satisfaction (Yang et al., 2025). These findings indicate that teacher support in BL can be a primary trigger for fulfilling autonomy, relatedness, and competence, and then that these three needs can improve students' motivation. In other words, the pedagogical effect of teacher support works indirectly.

Based on the findings above, three patterns are identified. First, autonomy is consistently reported as the easiest need to facilitate, especially by providing flexibility in time, place, and learning pace, which are offered by BL, flipped classroom, and hybrid learning (Banditvilai, 2016; Wong, 2019; Aldaghri, 2024). Second, competence and relatedness are more contextual needs that depend on pedagogical scaffolding, the quality of teachers' feedback, and opportunities for meaningful social interaction (Wong, 2020; Arifani et al., 2021; Yang et al., 2025). Third, some studies have indicated a trade-off pattern, in which BL designs that emphasise asynchrony tend to improve autonomy but limit the development of linguistic competence and social connectedness. Meanwhile, learning design, which is more structured and interactive, strengthens competence and relatedness, while also limiting autonomy (Labbafi et al., 2025; Wu et al., 2025).

Those patterns provide the implication that the effectiveness of BL in the ELT context is determined not by the model itself, but by how it is designed and implemented. The presence of trade-offs among the psychological needs shows that the fulfilment of autonomy, competence, and relatedness is not automatic or simultaneous, challenging the assumption of a balanced set of needs in ELT practices. Pedagogically, English teachers need to balance those three BPNs by managing offline-online activities and synchronous and asynchronous activities, which are in line with the demand of language learning and students' characteristics.

Research Question 2: Research Trends

The current study examined the trends in previous studies on basic psychological needs (BPNs) in the English blended learning context. The trends cover the research objectives, research methods, research participants, demographic information of the countries where the research was conducted, publication year, modes or platforms of blended learning, and outcomes.

Research Objectives

The objectives of the research are categorised into three as presented in Figure 2. The first category aims to evaluate the effectiveness and influence of blended English learning on learning outcomes and motivation. Article 1 aims to test the effectiveness of a blended learning environment, which combines one form of e-learning with traditional classroom teaching, on the language skills achievement

and learners' autonomy. This research does not explicitly mention BPNs, but it relates to autonomy as one of the BPN components. Article 3 examines whether online learning meets the basic learning needs of learners, particularly those of school students. Article 5 aims to investigate the efficacy of flipped learning (FL) in raising students' IM in grammar courses within the framework of Self-Determination Theory (SDT). Article 6 investigates the impact of synchronous, asynchronous, and hybrid learning models on the self-determined motivation of English as a Foreign Language (EFL) learners.

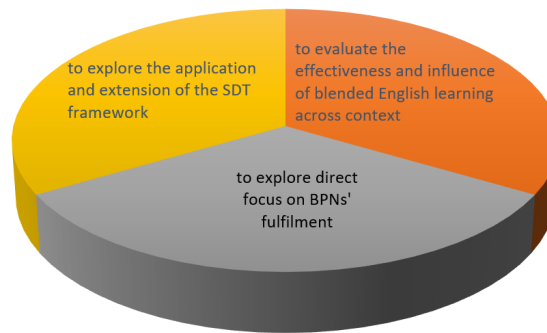


Figure 2. Category of Research Objectives

The second category is to explore direct focus on BPNs' fulfilment. It includes article 2, which aims to examine whether students' basic psychological needs are met in relation to changes in educational context and to explore students' opinions on the importance of their basic psychological needs. Article 4 aims to investigate in-service teachers' and learners' perspectives of BPN fulfilment and its issues in the context of blended professional training.

The third category is to explore the application and extension of the SDT framework. It includes article 7, which aims to develop a Culture, Authenticity, and Relevance-Sociocultural Theory (CAR-SCT) instructional framework that integrates Self-Determination Theory (SDT), Sociocultural Theory (SCT), and blended learning to meet the specific needs of low-level EFL learners in Chinese primary schools. Besides, article 8 aims to explore the interrelationships among teacher support, self-determination theory (SDT) motivation, learning engagement, and learning motivation.

Based on the categorisation above, the most dominant objective is to evaluate the effectiveness and influence of blended English learning on learning outcomes and motivation, while the other two objectives, which are underexplored, are to explore direct focus on BPNs' fulfilment and to explore the application and extension of the SDT framework. Besides, it indicates that research in this field is in the early to mid-maturity phase, in which pedagogical effectiveness has already been established, but SDT theory development and integration remain partial and not systematic.

Research Methods

In terms of research methods, the selected studies applied mixed-methods, research and development, and quantitative methods as stated in Figure 3.

However, mixed methods were mainly applied (6 studies) using the sequential explanatory design, which consists of two separate steps: first, quantitative data are gathered and analysed; subsequently, qualitative data are gathered and analysed to provide a more comprehensive description of the quantitative results.

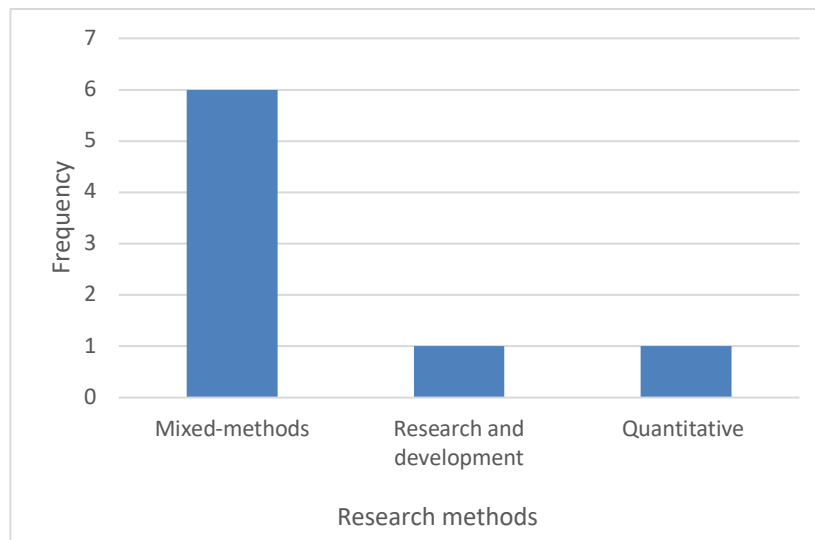


Figure 3. Research Methods

The distribution of research methodology shows the domination of the mixed-method approach, indicating the efforts of the researchers to be pragmatic using a “safe” approach. On the contrary, the limited number of purely quantitative and research and development (R&D) studies shows that tight causal testing and the development of theory-based models or instruments are limited in their ability to explore. This pattern confirms that research in this field tends to be in the explorative-confirmatory phase, focusing on verifying pedagogical benefits, and has not progressed to methodological consolidation and the reinforcement of research design, which can support generalisation and more solid theoretical development.

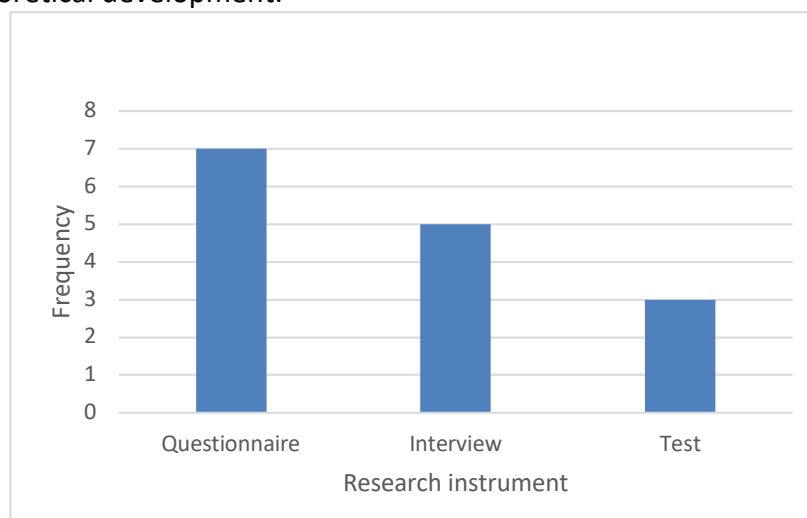


Figure 4. Research Instruments

In addition to methods, the instruments employed were questionnaires, tests, and interviews, with questionnaires being frequently applied, as stated in Figure 4. In fact, each researcher has their own type of questionnaire, which they adapt and develop from various sources such as self-determination theory, basic psychological needs theory, and the BPNs scale.

Figure 4 shows that the frequent use of questionnaires implies a research focus on simplicity and efficiency in data collection rather than on in-depth analysis, which could result in surface-level findings. The limited frequency of interviews and tests reflects the inadequacy of the methodological triangulation.

Research Participants

The participants or subjects involved in the research varied in age and level of education. They were EFL university students from various majors enrolled in English courses. There were also undergraduate students majoring in English, for whom English is their academic major, not just a subject. There were also secondary and primary school students aged 7–18. The last participants involved were in-service teachers who joined the teacher certification program through the In-service Teacher Professional Education (PPG) program, with a maximum age of 58. EFL university students and secondary school students were the participants most involved in the research, as presented in Figure 5.

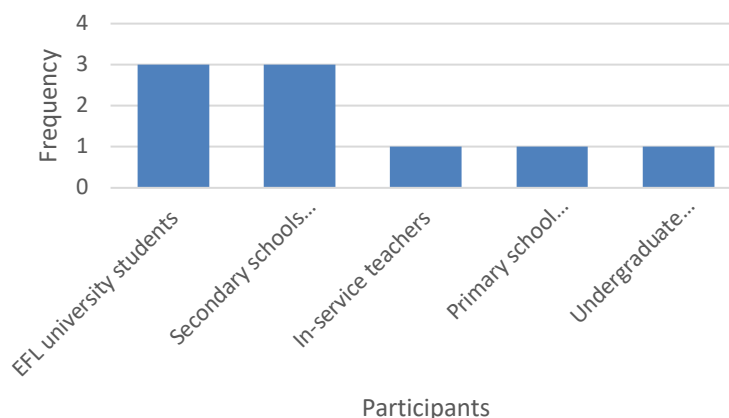


Figure 5. Research Participants

Referring to Figure 5, EFL university students and secondary school students were the most participants in the research.

Demographic Information

The demographic information in Figure 6 shows the countries where the research was conducted. All of the research had been conducted in Asia, where China and Hong Kong were the most frequently chosen countries as research settings. The other settings are Indonesia, Iran, Saudi Arabia, and Thailand.

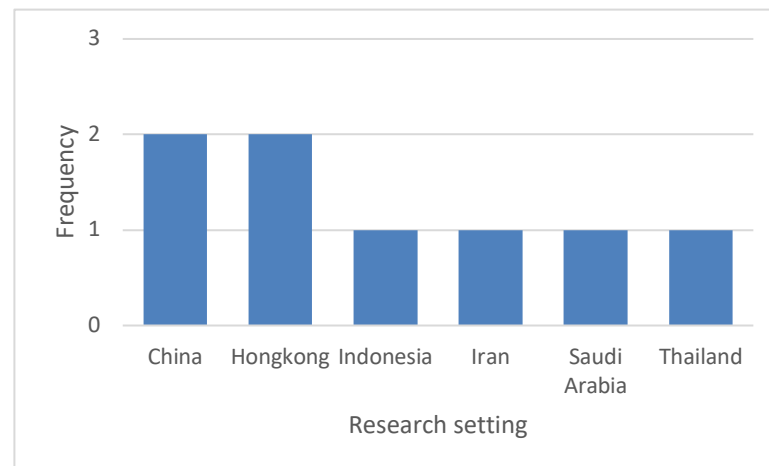


Figure 6. Demographic Information

Figure 6 indicates that East Asian countries are aware of the implementation of BPNS in the ELT context. This pattern implies that only a limited region has a concern on this topic.

Publication Year

The sources of this study are articles published between 2016 and 2025, as presented in Figure 6. It was found that only two studies were published before COVID-19, in 2016 and 2019. During and after the COVID-19 pandemic, six research studies were published in 2020, 2021, 2024, and 2025. In 2025, data collection was limited to six months, from January to June, despite three research studies already having been conducted.

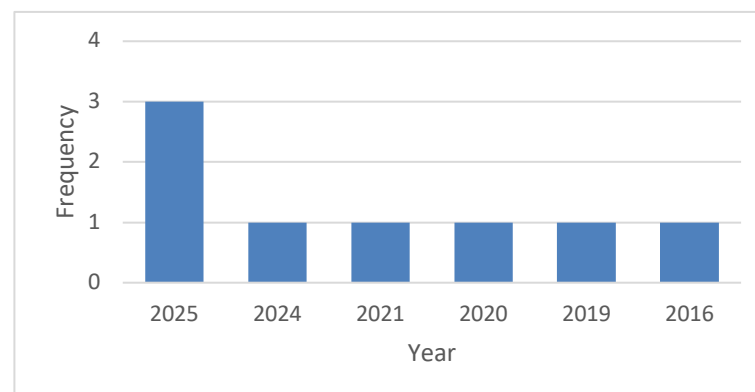


Figure 7. Publication Year

Figure 7 implies that publications before COVID-19 were relatively low and stable, with only one article for each year. However, after COVID-19, the publication increased a lot, which strongly indicates that COVID-19 encouraged the increase of attention and productivity of research in this field.

Learning Platform

The learning platforms used for blended learning include Google Classroom, Zoom, Microsoft Teams, and other unspecified platforms, as shown in Figure 7. Google Classroom is a free learning management system from Google that enables teachers to create, send, and track assignments without using paper. It enables instructors and students to communicate and track learning materials, including documents, videos, and links. Blended learning utilises technology to provide students with access to class materials, submit homework, and receive feedback at any time, making it ideal for learning that occurs at different times. Zoom is a video conferencing platform that lets people talk in real time via video, audio, and chat. Instructors may conduct live online classes, share screens, and utilise breakout rooms for group discussions. Zoom is widely used for live learning sessions in a blended learning scenario, where teachers and students engage just like they would in a real classroom. Microsoft Teams is a platform for working together that lets you have video calls, chats, share files, and use Microsoft Word and PowerPoint. It has tools made just for school, such as assignments, grading, and class notebooks. Microsoft Teams is the leading platform for both synchronous and asynchronous learning in blended learning. This means that students can access virtual classrooms, work on group projects, and find course materials all in one place.

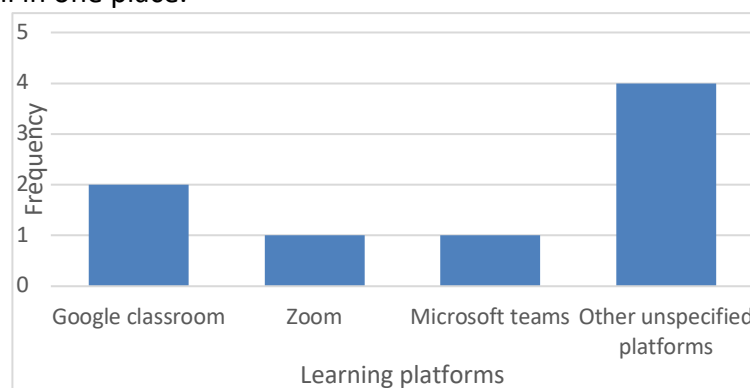


Figure 8. Learning Platforms

Figure 8 shows that other unspecified platforms are used frequently, suggesting that most research has not specifically mentioned platform use. It also indicates that Google Classroom, Zoom, and Microsoft Teams are the most popular and easiest to remember.

Research Question 3: Research Gaps

While current research on blended learning in English Language Teaching has yielded significant insights into its implementation and efficacy, a further analysis reveals other aspects that remain inadequately investigated. Many studies have focused on general perceptions, the use of technology, or instructional outcomes; however, several important dimensions have received far less attention. In addition, differences in research aims, methodological approaches, and contextual settings have produced inconsistent findings, making it difficult to develop a clear and comprehensive understanding of how blended learning influences English language development. The unresolved challenges underscore

the need for additional research that addresses existing constraints and provides a more comprehensive, evidence-based understanding of blended ELT techniques.

Firstly, outcome-related gaps. The majority of studies found that English blended learning satisfied BPNs. However, few of them measured the impact of their blended learning on students' English achievement. Only the grammar component was tested, and the other components, including vocabulary, pronunciation and the four English skills such as reading, listening, speaking and writing, were not. For example, Labbafi et al. and Wong did not measure students' achievement (Labbafi et al., 2025; Wong, 2019). In addition, BPNs and English blended learning need to incorporate additional mediators to explain mechanisms, clarify causal relationships, and verify the theoretical model. Secondly, methodological gaps. Most studies employed mixed-methods; it is highly recommended to conduct a study using a research-and-development design to develop a framework for English blended learning incorporating BPNs and other theories. Besides, of the eight studies reviewed, all involved students as participants and only one involved both students and in-service teachers. In fact, it is also crucial to measure teachers' BPNs in English blended learning to provide a more comprehensive context, especially since they design, conduct and evaluate it. Thirdly, contextual gaps. As all the research settings were in Asia, conducting similar or empirical studies in different continents, including Europe, Africa, America, and Australia, within an EFL context would also be insightful. In addition, this study appears to have reviewed only English-language articles. To gain a broader perspective, it is recommended that articles written in other languages be considered for review, as this can provide a more comprehensive understanding of the topic. Finally, a theoretical gap. Theoretically, most previous studies have applied self-determination theory as a framework to explain learning motivation, but it has not been tested to its limits or deepened the theoretical construct in IT-based learning. Summary of findings based on BPNs components, participants, and method is presented in Table 3.

Table 3. Summary of results based on the BPNs components, participant and method

BPNs Focus	Article	Participant	Research Methodology	Main Finding
Autonomy	1 & 3	EFL students	Mixed-method	Flexibility and self-paced learning improve intrinsic motivation
Competence	2 & 5	Students at university and school	Quantitative	Feedback and scaffolding improve the feeling of capacity and learning achievement
Relatedness	4 & 7	EFL students	Mixed method/ SEM	Teachers and students' interaction mediates the involvement and satisfaction

Integrated (SDT)	6 & 8	University students	Analytical model	BPNs fulfilment work simultaneously through engagement
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Discussion

The present study investigated trends in the basic psychological needs of English blended learning studies published between 2016 and 2025. The systematic review drew significant conclusions and identified gaps in the previous studies.

Patterns

Regarding the pattern of satisfaction unfulfillment, it cannot satisfy autonomy, as the definitions or concepts of autonomy understood by the students deviate from the school norm (Wong, 2019). Meanwhile, it cannot satisfy relatedness due to insufficient social and physical connections with teachers and peers in a conventional classroom setting during COVID-19 (Wong, 2020), and a lack of online care or support from teachers (Arifani et al., 2021). Assessing social connection is challenging, yet it is crucial in learning; three indicators can be applied to evaluate this connection, including socialising or being with other people, social support from others, and a sense of belonging (Wheele et al., 2024). They further explained that the emotional atmosphere of the online space led students to feel differently about the physical space, which in turn changed how they connected.

The differences of the pattern in the fulfilment of BPN in blended learning show that this model is not homogeneous, but it depends on the learning design, proportion of synchronous and asynchronous activities, and teachers' roles. The imbalance in learning design could strengthen one component of PBNs, but at the same time, may weaken the other components (Marcellis et al., 2024). These heterogeneous patterns may pose challenges in the ELT context because each combination of offline and online may have different potency to support the BPNs. This circumstance requires simultaneous fulfilment of BPNs and affirms the important role of teachers in balancing those needs (Ryan & Deci, 2017).

Physical meetings, therefore, are pivotal learning sessions that cannot be entirely replaced by virtual sessions. Social and physical connections, such as face-to-face communication and direct eye contact between students and teachers, may better build understanding. In some instances, proper and affective physical touch as a part of physical connection can be a way for teachers to get their pupils more involved in schoolwork, help teachers connect with their students better (Hakim & Farsani, 2024), affective touch involves complex neurobiological processes such as the release of oxytocin and endorphins, which contribute to generating a calm and well-being state (Schirmer & McGlone, 2022). However, physical touch should be considered in light of existing social and religious rules.

To address the problem of insufficient online care or support from teachers, Borup et al., offer multiple actions for teachers, including advising students on course enrolments, orienting them to online learning procedures and

expectations, facilitating interactions, developing caring relationships, motivating students to engage more fully in learning activities, organising and managing student learning, and instructing students on course content (Borup et al., 2019). Teachers, then, are the leading party in the successful implementation of blended learning. Teachers' support indirectly influenced learners' engagement through the mediating role of enjoyment and the sequential mediating roles of both delight and boredom (Liu & Zhou, 2024).

Among the three components of BPNs, English blended learning can satisfy autonomy unconditionally and can satisfy relatedness and competence conditionally. Autonomy is easier to fulfil, as blended learning provides choices to study through guided and face-to-face activities and independently using online platforms. In the context of current learners who are digitally aware and literate, online learning is not an issue and even provides flexibility and ease for learners.

The eight articles reviewed indicate that autonomy, relatedness, and competence are interdependent, establishing an evolving framework of basic psychological needs that incorporates BL and ELT. The research carried out by Banditvilai (2016) and Wong (201, 2020) indicated that giving students autonomy in their learning could promote a greater feeling of competence. In addition, this autonomy component will have significant weight when enforced by favorable social relations with students and teachers. Arifani et al. (2021) and Aldaghri (2024) observed that a feeling of relatedness is also a key element that boosts a connection between autonomy and competence. Positive interactions, appropriate feedback, and a cooperative learning atmosphere improve students' confidence level in selecting learning alternatives. Labbafi et al. (2025), Wu et al. (2025), and Yang et al. (2025) reported that learning approaches that are based on Self-determination theory perform fruitfully when all three components of BPNs are fulfilled concurrently. In short, the absence of satisfaction on one need could hinder the satisfaction or fulfilment of others.

Research Trends

Regarding the research methods, the trend indicates that a sequential explanatory mixed-methods design was popular, as researchers sought to expand and clarify the findings of the quantitative design through the qualitative design. It allows researchers to explore the relationship between variables in depth (Fraenkel et al., 2012) provide an alternative perspective in a study (Creswell, 2012), employ a pragmatic philosophical framework, and offer the benefit of being dynamic and adaptive (Aramide et al., 2023). Basic psychological needs will be more comprehensively captured if mixed methods are applied. Some other types of mixed methods, however, like convergent parallel design, exploratory sequential design, embedded design, and multiphase design, were absent. Besides, there were no qualitative or systematic literature reviews to analyse this topic. A questionnaire is more frequently used to understand BPNs. In a specific psychological research, it also appears as a popular instrument (Grassini & Laumann, 2020). A questionnaire offers a practical and cost-effective method for

collecting data, particularly in gathering extensive information on basic educational topics (Rathi & Ronald, 2022).

In terms of research participants, it spans from primary school to university students and teachers. However, the demographic information does not provide a more comprehensive or representative sample of participants who are only from Asia. The authors, Decy & Ryan, who proposed self-determination theory including BPNs, are from the United States of America, and Van der Kaap-Deeder et al., (2020) who developed the BPNF scale are from Europe, yet no single research has been conducted in the USA or Europe. The more participants from different countries, the more comprehensive and complex the context will be. In a specific study, the inadequate representation of racial and ethnic diversity in research may restrict the acceptability of results to a broader community, underscoring the necessity for more diversity and inclusion (Shea et al., 2022).

Regarding publication year, it is clear that six of eight studies were published after the COVID-19 pandemic. It strongly indicates that COVID-19 has boosted the use of online and subsequently blended learning (Sia et al., 2023). Some current studies also reveal that blended learning has become prevalent to enhance the conventional face-to-face teaching and learning methods due to its user-friendliness, utility, and accessibility, which was employed for quizzes, assignments, and obtaining lecture notes, among other applications (Dei, 2025), EFL students endorse blended learning (Febrianto et al., 2025), teachers liked both face-to-face and blended learning (Simonova et al., 2023). Therefore, the number of studies about blended learning increased during and after COVID-19.

In addition, learning platforms used in blended learning are divided into two different types: learning management systems (LMS) using Google Classroom and video conferencing using Zoom. Both LMS and video conferencing utilise the mainstream source. In fact, numerous LMS and video conferencing platforms can be utilised for blended learning. Hermosisima et al., mention that Moodle, Canvas, and Blackboard are LMS platforms which are great for online modular learning since they have a lot of features, like content management, discussion forums, assessment tools, and collaborative spaces (Hermosisima et al., 2023). In addition, Zoom, Microsoft Teams, and Google Meet have all been useful for live classes, virtual discussion forums, and group work. They make online classrooms feel like real classrooms where people can connect with each other. In addition to those platforms, some other well-known tools for video conferencing are Skype, Webex Meetings, BlueJeans Meetings, Intermedia AnyMeeting, RingCentral Video, GoTo Meeting, ClickMeeting, Zoho Meeting, Slack, MyOwnConference, and Loom (Ling et al., 2024).

CONCLUSION

This systematic literature review revealed notable trends and findings regarding the basic psychological needs in English blended learning. There is limited research on that topic, but it is constantly improving since the COVID-19 pandemic. Among 2021 articles or studies from various credible sources, including

Scopus, ProQuest, and Google Scholar, only eight are related to the topic of basic psychological needs in English blended learning.

Based on the earlier results and discussion, the following points provide directions for further research. First, previous research has primarily focused on exploring the occurrence and levels of Basic Psychological Needs (BPNs)—autonomy, competence, and relatedness—within blended learning in the ELT context. Only limited research has examined how BPNs' fulfilment can directly affect students' achievement, especially in language proficiency. This gap proposes future research on applying experimental and longitudinal methods to control how fulfilling these BPNs could design measurable research results, such as reading and speaking proficiency. In addition, investigating moderating variables such as digital literacy, learning engagement, or self-regulation will help understand how BPNs contribute to language proficiency.

Second, substantial existing research emphasises students' opinions, while ignoring the crucial role of teachers in designing and implementing a blended learning environment that supports the fulfilment of BPNs. Therefore, future research should involve teachers as essential participants to explore their opinions, teaching and learning practices, and the strategies they use to address issues, so that blended learning in the ELT classroom can run smoothly. Incorporating both teachers' and students' opinions would offer a more profound, broader understanding of how interaction patterns, teaching and learning designs, and technology shape teaching efficacy and students' motivation. Moreover, research on BPNs in English blended learning has predominantly involved English majors and EFL university students whose learning orientation is towards general English rather than specific purposes. In fact, higher education students need to learn English based on its context. It reinforces the importance of narrowing the scope to English for Specific Purposes (ESP) contexts, where students' objectives, curricular demands, and linguistic needs vary considerably.

Third, although Self-Determination Theory (SDT) remains the fundamental research framework for examining BPNs, the explanatory model could be further developed by integrating other constructs from education and psychology. Future research must examine how the moderating variables, social presence, emotional intelligence, digital resilience, and technological self-efficacy, affect blended learning in ELT. A more thorough explanation of how BPNs work, combining pedagogical and technological aspects to influence students' achievement and motivation in BL, would also present new insight.

Fourth, all current research on BPNs in English blended learning has been published in English and conducted in the Asian context, which limits the applicability of the findings to broader contexts with different settings and cultures. Therefore, future research should identify papers written in languages other than English and broaden its scope to include continents such as Australia, Africa, the Americas, and Europe. This cross-cultural, cross-linguistic research would enable researchers to identify context-specific factors that influence students' achievement and to reinforce the evidence for the universality of BPN theory.

Fifth, the current research methodology applied is a descriptive and correlational design. In contrast, developmental research is limited or absent in this research. Researchers are highly urged to conduct research and development (R&D) design to create and provide approval of an English BL framework which integrates BPN philosophies along with other theoretical frameworks such as the Community of Inquiry (CoI) framework, the Technology Acceptance Model (ATM), and the Cognitive Load Theory (CLT). These frameworks may offer practical guidance for designing an English blended learning environment that increases motivation and is effective in the teaching and learning process.

This review contributes theoretically by affirming that SDT and BPNs are key components of a conceptual framework for explaining how BL influences motivation and achievement, and practically ELT practitioners and policy makers could direct ELT practices toward a more psychological-pedagogical approach that integrates teaching methodology and students' psychological conditions.

ACKNOWLEDGMENTS

We would like to express our gratitude to Riski Lestiono, PhD, for the methodological insights provided during the development of this SLR. We are also very grateful to the reviewers for their invaluable contributions to improving the quality of this article through critical feedback.

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