

TECH-INFUSED BUSINESS ENGLISH LEARNING: A STUDENT-CENTRIC EXPLORATION*

Rerkchai Ponsri¹, Tasnee Keawngam², Wenxin Dong³, Wei Shang⁴,
Yarnaphat Shaengchart⁵ and Natphitsa Chaowanachaemchun⁶

¹⁻⁶International College, Pathumthani University, Thailand

Corresponding Author's Email: yarnaphat.s@ptu.ac.th

Received 29 May 2025; Revised 21 July 2025; Accepted 23 July 2025

Abstract

This study explores students' perspectives on the integration of technology in learning business English. With technological advancements transforming education, digital tools such as online platforms, AI-driven applications, and multimedia resources have enhanced engagement, accessibility, and personalization in business English instruction. Using a qualitative research approach, this study employs in-depth interviews with business English students to examine their experiences, perceived benefits, and challenges associated with technology-assisted learning. Content analysis was employed to analyze the data.

Findings indicate that students appreciate the flexibility and interactivity of digital resources, which improve language proficiency and business communication skills. However, concerns such as technical issues, limited human interaction, and digital distractions present significant challenges. While digital tools offer valuable learning opportunities, the study highlights the need for a

Citation:



* Rerkchai Ponsri, Tasnee Keawngam, Wenxin Dong, Wei Shang, Yarnaphat Shaengchart and Natphitsa Chaowanachaemchun. (2025). Tech-Infused Business English Learning: A Student-Centric Exploration.

Journal of Interdisciplinary Social Development, 3(5), 578-601.;

DOI: <https://doi.org/10.>

Website: <https://so12.tci-thaijo.org/index.php/JISDIADP/>

balanced approach that combines technology with traditional teaching methods. This research contributes to understanding how students navigate digital learning environments and provides insights for educators, curriculum designers, and policymakers in optimizing technology use for business English education. The study emphasizes the importance of structured technology integration that fosters engagement while addressing potential barriers, ultimately enhancing students' preparedness for global business communication.

Keywords: Business English, Technology Integration, Digital Education, Student Perspectives

Introduction

Education plays a pivotal role in contemporary society, and technological advancements have ushered in exciting innovations within this domain. In contrast to the educational landscape half a century ago, today's students require more than what was previously considered adequate to excel in college, careers, and civic life in the 21st century. Preparing students for the challenges of this era, marked by globalization, innovation, migration, international competition, evolving markets, and transnational environmental and political issues, is an increasingly complex task. Technology has ingrained itself into modern society, profoundly influencing various facets of life, education being no exception. The convergence of increased literacy rates and recent technological breakthroughs has led to the widespread integration of technology in educational settings. The current generation of students, represented by millennials and Gen-Z, possesses distinct traits that shape their educational experiences. They are not content with passive learning; instead, they seek active engagement in the learning process. Hence, modern education necessitates the incorporation of technology, with educators expected to seamlessly blend it into their teaching methods (Aithal & Maiya, 2023; Jangjarat et al., 2023; Klayklung et al., 2023;

Mhlongo et al., 2023). Leveraging technology within the classroom holds immense potential to enrich the learning journey for students. Digital tools offer opportunities for personalized learning experiences, foster collaboration among students, and provide access to a vast repository of information (Sarker et al., 2019; Timotheou et al., 2023). Furthermore, digital technologies have the potential to significantly improve educational outcomes. Tools like artificial intelligence (AI), online learning platforms, gamification, and virtual and augmented reality can tailor learning experiences to individual students, fostering collaboration and communication while granting access to extensive informational resources. Additionally, these digital innovations can bridge the divide between conventional classroom instruction and practical real-world applications, equipping students with the skills needed for careers in technology-driven sectors. Consequently, proficiency in utilizing technology should be regarded as a fundamental requirement for both educators and students alike (Alam & Mohanty, 2023; Annamalai et al., 2023; Klayklung et al., 2023; Siripipatthanakul et al., 2023; Xia et al., 2023).

As the business environment has become more globalized, English has become more widely used and spread. English for business is a specialized form of English that is used in professional and corporate settings. It entails using appropriate language and communication skills to conduct business transactions, negotiations, meetings, presentations, and other business-related activities (Fitria, 2019; Rao, 2019). Studying English for business is essential in today's interconnected world. It provides learners with a valuable skill set that goes beyond language proficiency. Proficiency in English equips learners with the ability to communicate effectively in global business environments, giving them a competitive edge in the job market. Furthermore, it opens doors to international career opportunities, fosters cross-cultural competence, and enhances their overall communication and networking skills. In an era where business transcends borders, English for business is not just a subject of study; it

is a passport to success in the global marketplace (Johnson, 2009; Roshid & Kankaanranta, 2023).

The integration of technology into English learning has brought forth a new era characterized by enhanced efficiency and accessibility. Learners now have an array of tools and resources at their fingertips, including online courses, language learning apps, and virtual materials. These resources empower individuals to master English at their own pace and according to their unique preferences. Technology provides diverse learning experiences, such as interactive platforms tailored to individual learning styles and virtual reality simulations that replicate real-world scenarios (Ahmadi, 2018; Haleem et al., 2022; Yan & Moorhouse, 2023). Furthermore, as businesses increasingly operate on a global scale, the proficiency in English, facilitated by technology, has become not just an advantage but a necessity for future professionals. These digital resources not only improve language skills but also cultivate cultural competence, preparing students to thrive in an interconnected and technology-driven business landscape (Jiang et al., 2021; Riel, 2023).

There exists a growing body of research that investigates the use of technology in language learning. For instance, in a study by Woodson (2020), the role of student satisfaction in mediating the relationship between the perceived usefulness and ease of use of the Technology Acceptance Model (TAM) and the intention to use an online English dictionary was examined. Another study conducted by Lai et al. (2022) concentrated on mobile technology and self-directed language learning outside the classroom. They employed the integrative model of behavior prediction to investigate relationships between attitude, subjective norm, self-efficacy, behavioral intention, as well as the association between intention, facilitating conditions, self-regulation skills, and the actual use of mobile technology in self-directed language learning. However, there is a noticeable research gap in thoroughly exploring students' perspectives

regarding the specific integration of technology in learning business English. Despite the increasing prevalence of technology in educational settings, there is limited empirical research that delves deeply into students' attitudes, preferences, and challenges when it comes to utilizing technology for learning business English. Therefore, this study aims to address this research gap by comprehensively examining the perspectives of students regarding the utilization of technology in learning business English.

Objectives

With the growing integration of technology in language education, it is crucial to understand how students perceive its impact on their learning experiences. This study aims to explore students' opinions, attitudes, and experiences regarding technology-assisted business English instruction. It may provide valuable insights from a student-centric perspective on technology integration in business English education, assisting directors, educators, curriculum designers, and other stakeholders make informed decisions about the adoption and optimization of technology in their teaching practices.

Methodology

Research Design

This study employed a qualitative research approach to explore students' perspectives on the integration of technology in learning business English. Qualitative research explores the underlying reasons for a phenomenon by examining the contextual factors that influence individuals' or groups' decisions and behaviors (Limna et al., 2024). Hence, this approach is appropriate as it allows for an in-depth understanding of students' experiences, perceptions, and attitudes toward technology-assisted language learning. Through qualitative

inquiry, this study aims to provide rich, contextual insights into how students interact with technological tools in their business English learning process.

Participants and Sampling

Purposive sampling was used as a strategic method for selecting participants, which is typical of qualitative research. This approach entails selective recruitment of individuals based on the researchers' informed judgment, tailored to meet the specific needs of the investigation (Limna & Kraiwanit, 2024; Rafiyya et al., 2024). The study involved business English students from a university setting, who actively engage with technology in their language learning. The inclusion criteria required participants to have prior experience using digital tools such as online learning platforms, language applications, and multimedia resources for business English learning. According to Limna (2023), a minimum of six interviews appears to be the optimum amount for achieving data saturation in qualitative research. Therefore, a total of 12 students participated in this study, representing diverse backgrounds in terms of academic standing and technological proficiency.

Data Collection Methods

Data were collected through interviews. In-depth interviews yield comprehensive insights on a specific topic, ensuring precise information aligned with the research objectives. The interactive nature of the conversation allows for dynamic data collection, enabling the researcher to gather additional details as the discussion progresses (Limna et al., 2023). The interviews allowed participants to express their thoughts freely while ensuring that key topics related to the research objectives were covered. The interviews included open-ended questions focusing on students' experiences with technology in learning business English, perceived benefits and challenges, and their overall attitudes toward digital tools in education. All interviews were recorded and transcribed for analysis. Ethical guidelines were strictly adhered to throughout the research

process. Participants were informed about the purpose of the study, their voluntary participation, and their right to withdraw at any time without consequences. Informed consent was obtained before data collection, and confidentiality was maintained by anonymizing participant responses.

Data Analysis

Content analysis is a qualitative method that describes and quantifies specific phenomena using valid inferences from verbal, visual, or written data (Siripattanakul et al., 2022; Woodeson et al., 2023). Thus, content analysis was employed to examine the qualitative data collected from interviews. This method allowed for the systematic categorization and coding of data to identify patterns, themes, and emerging insights related to students' experiences and perceptions. The analysis involved reading and re-reading the transcripts to develop coding categories, grouping similar responses, and interpreting the findings based on recurring themes. To ensure the trustworthiness of the findings, strategies such as member checking and peer debriefing were employed. Member checking involved providing participants with summaries of their responses to verify accuracy. Peer debriefing with colleagues in language education and qualitative research further strengthened the reliability of the analysis and interpretations. This approach ensured an objective and replicable analysis of textual data, providing a structured understanding of the integration of technology in business English learning.

Results

The key findings from the study focused on students' perspectives regarding the integration of technology in learning business English. The results were categorized into five main areas: ease of access to technological resources, the extent and nature of technology use, perceived benefits of digital tools, challenges and limitations encountered, and the impact on learning outcomes.

These insights provide a comprehensive understanding of how students engage with technology in their business English education, highlighting both opportunities and areas for improvement.

Ease of Access

The findings indicate that the majority of students have access to technological resources that significantly support their business English learning. Most participants reported having personal computers or mobile devices equipped with various language learning applications and online platforms, which they used both for formal academic purposes and self-directed study. These tools provided students with access to an array of interactive materials, including online dictionaries, grammar-checking software, and business-related podcasts or webinars, which contributed to enhancing their language skills. Moreover, university-provided resources such as digital libraries, e-books, and virtual classrooms were widely acknowledged as valuable assets. These resources offered students an abundance of e-learning modules and collaborative learning environments that facilitated engagement with course content. Students also appreciated the flexibility that online platforms offered in terms of scheduling and accessing educational materials at their convenience, enhancing the overall learning experience. However, a subset of students raised concerns regarding challenges related to inconsistent internet connectivity, especially in rural areas, which hindered their ability to access resources consistently. In these cases, some students experienced delays in online sessions, difficulties in downloading materials, or even interruptions during examinations. Additionally, the limited access to premium educational software, such as specialized language learning tools and business simulation platforms, was seen as a significant barrier for certain students, particularly those from lower socio-economic backgrounds. These constraints impeded their ability to fully utilize the available educational technologies, thereby impacting their learning outcomes. Furthermore, a few

students expressed the need for more comprehensive training on how to maximize the use of digital tools for language learning. They noted that while the technologies were available, they often lacked guidance on how to integrate them effectively into their study routines. This gap led to underutilization of some advanced features of the learning platforms, thus affecting their overall engagement with technology-enhanced education. These findings highlight the need for better support systems that offer both technical training and accessible resources to ensure that all students can make the most of the digital tools available to them.

Use of Technology

Students actively integrate various digital tools into their learning processes to enhance their understanding and proficiency in business English. Online platforms, including language learning applications, virtual classrooms, and multimedia resources, were frequently used to improve comprehension, retention, and overall language skills. These tools enabled students to engage with course materials in a dynamic and interactive way, often incorporating videos, quizzes, and discussions that reinforced key concepts. In addition to conventional learning platforms, students also engaged with more advanced digital resources, such as interactive simulations, AI-driven chatbots, and gamified content. These technologies provided immersive experiences that allowed students to practice business communication skills in simulated, real-world scenarios. For example, AI chatbots helped students improve their conversational abilities by providing instant feedback on their responses, while gamified elements introduced a competitive yet engaging environment for learning. Some students specifically highlighted the benefits of speech recognition software, which proved particularly useful in enhancing their pronunciation and fluency in business-related discussions. By receiving real-time feedback on their spoken language, students were able to address pronunciation issues and increase their confidence in using business terminology in professional contexts. Despite the

widespread use of digital tools, a number of students expressed concerns about the steep learning curve associated with unfamiliar software. They noted that initial interactions with certain applications or platforms could be overwhelming, requiring significant time and effort to master. Additionally, the sheer volume of available digital resources sometimes made it difficult for students to select the most suitable tools for their learning needs. This information overload occasionally led to frustration, as students struggled to navigate and prioritize the various resources at their disposal. While many students valued the flexibility and convenience offered by asynchronous learning tools, some expressed a preference for real-time interactions with instructors. These students emphasized the importance of immediate clarification when doubts or questions arose, preferring face-to-face communication or live virtual sessions to enhance their understanding. The preference for synchronous learning highlighted the value students place on instructor guidance and the ability to receive instant feedback, underscoring the need for a balanced approach that combines both asynchronous and synchronous elements in digital learning environments.

Perceived Benefits

The integration of technology in business English learning was largely perceived as beneficial by the participants. Many noted that the use of interactive and multimedia-rich content significantly increased engagement and motivation. The dynamic nature of digital resources, including videos, interactive exercises, and audio materials, kept students interested and invested in their learning. The ability to personalize learning paths through AI-driven applications further enhanced students' experiences, allowing them to focus on areas that needed improvement while practicing language skills in real-time. This adaptability led to higher confidence levels, particularly in business communication, as students could tailor their learning journeys to their individual needs and progress at their own pace. Furthermore, students appreciated the flexibility offered by

technology, which enabled them to learn at their own convenience. The ability to revisit content, practice lessons multiple times, and access resources whenever needed provided students with a sense of autonomy and control over their learning. This flexible approach contributed to more consistent learning and a deeper understanding of business English concepts, as students could balance their studies with other commitments. In addition to individualized learning, many students emphasized the positive impact of digital collaborative tools in fostering a more engaging and cooperative learning environment. Online discussion forums, cloud-based document sharing, and peer review systems allowed students to collaborate, share insights, and give constructive feedback to one another. These tools not only enhanced communication skills but also promoted teamwork and critical thinking, key components of business success. Moreover, students found the real-world application of business English through virtual business simulations and role-playing exercises to be particularly valuable. These activities provided opportunities to practice communication and negotiation skills in simulated business scenarios, offering a realistic and hands-on approach to learning. The immersive nature of these exercises helped students bridge the gap between theoretical knowledge and practical application, enhancing their preparedness for real-world business environments. Ultimately, the integration of technology not only supported language acquisition but also fostered essential professional skills, making business English learning more relevant, engaging, and impactful.

Challenges and Limitations

Despite its numerous advantages, technology-assisted learning presented several challenges and limitations that impacted the overall learning experience. One major issue identified by students was technical difficulties, such as software malfunctions, internet connectivity problems, and compatibility issues across different devices. These technical barriers disrupted the flow of learning, causing delays and, at times, preventing students from fully engaging with the digital

resources available. Some students reported that intermittent internet access, particularly in rural areas, hindered their ability to participate in live sessions or access important learning materials. Additionally, the potential for distractions from non-educational digital content was a recurring concern. Students mentioned the constant presence of social media notifications, entertainment apps, and other unrelated digital stimuli, which often diverted their attention from the academic tasks at hand. This challenge was particularly evident during self-paced learning sessions, where students had more autonomy to manage their time but faced difficulty resisting distractions. Another limitation noted was the lack of direct human interaction in technology-driven learning environments. While online platforms allowed for asynchronous learning, many students felt that the absence of spontaneous discussions or immediate feedback from instructors and peers reduced the depth of their learning experience. Students valued face-to-face communication and the opportunity for real-time clarification of doubts. They expressed a desire for more opportunities for live interaction, where questions could be answered instantly, and more nuanced discussions could take place, something that asynchronous platforms often struggled to replicate. Some participants also pointed out that the reliance on automated feedback in language applications was insufficient for addressing complex grammar and stylistic nuances. While automated systems could handle basic language errors, they often fell short in providing detailed corrections or explanations for more sophisticated issues, such as tone, formality, or style. As a result, students found that they missed the opportunity to receive in-depth feedback from human instructors who could offer personalized guidance on these areas, ultimately limiting the development of their language proficiency. Furthermore, issues related to digital literacy were evident, as some students struggled to navigate certain e-learning platforms efficiently. They reported frustration with complex user interfaces, difficulty locating specific resources, or

trouble understanding how to use certain features effectively. This lack of familiarity with the technology often led to decreased motivation, as students felt overwhelmed by the tools they were expected to use. Addressing these challenges requires not only improvements in the technology itself but also additional support for students to develop their digital literacy skills, ensuring they can use e-learning platforms to their full potential.

Impact on Learning Outcomes

The majority of students reported a positive impact of technology on their business English proficiency, noting significant improvements in areas such as vocabulary acquisition, listening comprehension, and writing skills. Many students specifically credited interactive tools, such as AI-powered grammar checkers and language learning chatbots, for helping them refine their written communication. These tools provided immediate feedback on grammar and syntax, allowing students to make quick corrections and build stronger writing habits over time. Additionally, students appreciated how these tools enabled them to practice and improve their language use in a more dynamic and responsive manner.

The use of digital simulations and real-world business case studies also played a key role in enhancing students' ability to apply their language skills in professional contexts. Virtual environments that simulated real-world business scenarios, such as drafting professional emails, preparing presentations, and participating in virtual meetings, allowed students to practice their communication skills in settings that closely mirrored those they would encounter in their careers. This hands-on experience boosted their confidence and preparedness for future professional engagements, as they learned to navigate the language of business in various formats. Furthermore, some students found that the integration of multimedia content, including podcasts and video lectures, greatly improved their listening skills. These resources exposed students to various accents and speech patterns commonly used in global business environments, thereby increasing their familiarity with the linguistic diversity they

may encounter in professional contexts. The accessibility of these resources also provided students with the opportunity to listen to authentic business-related content, which enriched their vocabulary and understanding of industry-specific terms. However, despite these advantages, a few students pointed out that while technology provided supplementary benefits, it could not fully replace traditional classroom instruction, particularly in the development of nuanced verbal communication skills and cultural competence. Students expressed concerns about the limitations of technology in facilitating spontaneous conversation practice and the need for deeper interpersonal interactions to develop more effective verbal communication. Additionally, cultural nuances in communication, such as understanding the subtleties of tone, politeness, and non-verbal cues, were areas that technology-based tools struggled to address adequately. As a result, several participants suggested that a blended learning approach—combining face-to-face instruction with technology-enhanced learning—would be the most effective method for mastering business English. This approach would allow students to benefit from the interactive and flexible nature of technology while still receiving the essential interpersonal guidance and cultural insights that are best delivered through direct human interaction. Such a blended model could provide a more holistic and comprehensive learning experience, integrating the strengths of both traditional and digital learning methods.

Discussion

The findings of this study highlight the significant role technology plays in business English learning, particularly in enhancing accessibility, engagement, and personalized learning experiences. Students expressed that digital tools such as online platforms, language learning applications, and interactive multimedia resources improved their ability to practice language skills in real-world contexts.

These findings align with prior research (Ahmadi, 2018; Haleem et al., 2022; Limna et al., 2023), which emphasizes the effectiveness of technology in language acquisition by fostering interactive and immersive learning environments. Despite these advantages, students also reported various challenges associated with technology-assisted learning. Common obstacles included technical difficulties, distractions from non-educational digital content, and a perceived reduction in human interaction. These findings underscore the need for a balanced integration of technology with traditional pedagogical approaches to maximize its benefits while addressing its limitations. Similar concerns have been noted in previous studies, highlighting that while technology enhances learning opportunities, it should complement rather than replace conventional instructional methods (Jiang et al., 2021; Moraes et al., 2023; Yan & Moorhouse, 2023). Furthermore, the study revealed mixed perceptions regarding the impact of technology on learning outcomes. While some students believed that digital tools significantly improved their business English proficiency by offering diverse practice methods, immediate feedback, and exposure to authentic language use, others felt that excessive reliance on technology led to passive learning habits. These students expressed concern that the passive consumption of content, such as watching videos or reading online materials without active participation, hindered their ability to engage critically with the language. This finding resonates with research by Bavishi et al. (2022), Dzaiy and Abdullah (2024), Oliveira et al. (2022), and Siripipatthanakul et al. (2025), which highlights the importance of balancing passive content delivery with interactive activities that promote active learning and problem-solving. These insights suggest that instructional design should incorporate structured technology use that encourages active engagement, critical thinking, and problem-solving skills, rather than passive content consumption. For instance, interactive tasks, collaborative projects, and opportunities for real-time feedback can foster deeper learning, ensuring that

technology serves as a tool for enhancing student engagement and learning outcomes, rather than a substitute for traditional learning methods.

Conclusion

This study provides valuable insights into students' perspectives on the integration of technology in business English learning, shedding light on both the potential benefits and challenges associated with this shift. The findings indicate that digital tools offer numerous advantages, such as increased accessibility to learning materials, greater student engagement through interactive features, and the adaptability to cater to individual learning preferences, enabling students to learn at their own pace and convenience. These tools also support the development of essential language skills, fostering a more personalized and dynamic learning experience. However, the study also identifies significant challenges that must be addressed to optimize the learning experience. Technical issues, including connectivity problems and software malfunctions, can disrupt the learning process, hindering students' ability to fully benefit from the digital tools. Additionally, the potential for distractions in an online environment—such as multitasking or the temptation of unrelated content—can undermine students' focus and engagement. Furthermore, while technology can enhance learning, it is clear that the need for human interaction remains crucial. Face-to-face communication, teacher guidance, and peer collaboration are indispensable components in business English learning, contributing to the development of practical communication skills and offering opportunities for feedback and clarification. The study emphasizes the importance of adopting a blended learning approach that combines the strengths of digital tools with traditional methods. By integrating technology with in-person instruction and interactive activities, directors and educators, as well as other stakeholders, can create a balanced and effective learning environment that maximizes the benefits of

both. This approach not only addresses the challenges identified in the study but also ensures that students continue to receive the human interaction and support necessary for their language development. Ultimately, a well-designed blended learning model can enhance the overall learning experience and better equip students with the skills needed for success in the business world.

Research Implications

The practical and academic implications of this study emphasize the transformative potential of technology in business English education and highlight the need for a balanced approach to its integration. In terms of practical implications, educators and curriculum developers should strategically incorporate technology to complement traditional teaching methods, ensuring that digital tools enhance rather than replace face-to-face interactions. Training programs for instructors should focus on equipping them with the skills necessary to effectively use technology, addressing challenges such as student engagement and technical difficulties. Additionally, institutions should promote a hybrid learning model that combines digital tools with essential human interaction, fostering a more holistic learning experience. Adequate technical support is also crucial, as universities must ensure smooth implementation of digital learning platforms to minimize disruptions and enhance the learning process. From an academic perspective, this study contributes to the expanding body of research on technology-assisted education by providing empirical evidence on its benefits and challenges in business English learning. It also addresses the limited research on students' perceptions of technology use in this context, paving the way for future investigations. Furthermore, the findings offer opportunities for pedagogical innovation, as researchers and educators explore new teaching strategies that integrate emerging technologies, such as artificial intelligence, virtual reality, and gamification, to further enhance language learning experiences. The study's insights can also inform research in related fields, including digital

education, instructional design, and applied linguistics, promoting interdisciplinary collaboration to improve teaching methodologies. Ultimately, by addressing both practical and academic implications, this study advocates for a thoughtful and well-structured approach to integrating technology in business English education, ensuring that its potential is fully realized while maintaining a balance with traditional teaching methods.

Recommendation

Based on the findings, here are some suggestions for optimizing technology integration in Business English education:

1. Embrace a Blended Learning Model: Design curricula that strategically combine online, technology-enhanced learning with traditional, face-to-face instruction. This approach allows students to leverage the benefits of digital tools while ensuring crucial human interaction, immediate feedback, and the development of nuanced communication and cultural competence.

2. Enhance Technical Support and Digital Literacy Training: Universities and educators should prioritize robust technical support systems to minimize disruptions from connectivity issues or software malfunctions. Additionally, provide comprehensive training for students on how to effectively navigate and maximize the use of various e-learning platforms and digital tools.

3. Promote Active and Collaborative Digital Learning: Move beyond passive content consumption by integrating more interactive tasks, collaborative projects, and opportunities for real-time feedback within digital platforms. Encourage the use of online discussion forums and peer review systems to foster teamwork and critical thinking, mirroring real-world business scenarios.

4. Invest in Targeted Technology Tools: Explore and invest in specialized technology tools that directly address the specific needs of Business English learners, such as advanced speech recognition software for pronunciation,

sophisticated AI chatbots for business-specific conversational practice, and realistic virtual business simulations.

5. Prioritize Instructor Training on Ed-Tech Integration: Equip instructors with the necessary skills to seamlessly blend technology into their teaching methods. Training should cover not only the technical aspects of tools but also pedagogical strategies for maximizing student engagement and addressing potential challenges like digital distractions.

By thoughtfully implementing these suggestions, educators and institutions can harness the full potential of technology to create a more dynamic, effective, and well-rounded Business English learning experience that truly prepares students for success in the global marketplace.

Limitations and Future Research

This study has several limitations, including its limited sample size from a single university, which may not represent a broader student population. Additionally, the study relied on students' subjective perceptions, potentially influenced by personal biases, and did not explore the long-term effects of technology on learning. It also did not examine which specific technology tools were most effective for business English learning. Future research should expand the sample size and include diverse students, instructors, and administrators to provide a more comprehensive view of technology integration. Long-term studies on technology's impact on language acquisition and performance are recommended. Research should also explore the effectiveness of various technology tools, such as AI, virtual reality, or gamified applications, in enhancing business English learning. Lastly, future studies could focus on creating strategies to address challenges like technical issues and distractions, ensuring a more active and engaging learning experience while maintaining essential human interaction.

References

- Ahmadi, D. M. R. (2018). The use of technology in English language learning: A literature review. *International Journal of Research in English Education*, 3(2), 115-125.
- Aithal, P. S., & Maiya, A. K. (2023). Innovations in higher education industry– Shaping the future. *International Journal of Case Studies in Business, IT, and Education*, 7(4), 283-311.
- Alam, A., & Mohanty, A. (2023). Educational technology: Exploring the convergence of technology and pedagogy through mobility, interactivity, AI, and learning tools. *Cogent Engineering*, 10(2), 1-37.
- Annamalai, N., Eltahir, M. E., Zyoud, S. H., Soundrarajan, D., Zakarneh, B., & Al Salhi, N. R. (2023). Exploring English language learning via Chabot: A case study from a self determination theory perspective. *Computers and Education: Artificial Intelligence*, 5, 1-8
- Bavishi, P., Birnhak, A., Gaughan, J., Mitchell-Williams, J., & Phadtare, S. (2022). Active learning: A shift from passive learning to student engagement improves understanding and contextualization of nutrition and community health. *Education Sciences*, 12(7), 1-13.
- Dzaiy, A. H. S., & Abdullah, S. A. (2024). The use of active learning strategies to foster effective teaching in higher education institutions. *Zanco Journal of Human Sciences*, 28(4), 328-351.
- Fitria, T. N. (2019). Business English as a part of teaching English for specific purposes (ESP) to economic students. *Jurnal Education and Economics*, 2(2), 143-152.
- Haleem, A., Javaid, M., Qadri, M. A., & Suman, R. (2022). Understanding the role of digital technologies in education: A review. *Sustainable Operations and Computers*, 3, 275-285.

- Jangjarat, K., Limna, P., Maskran, P., Klayklung, P., & Chocksathaporn, P. (2023). Navigating the digital frontier: A review of education management in the age of technology. *Journal of Management in Business, Healthcare, and Education*, 2023(1), 1-11.
- Jiang, Q., Soon, S., & Li, Y. (2021). Enhancing teachers' intercultural competence with online technology as cognitive tools: A literature review. *English Language Teaching*, 14(3), 1-11.
- Johnson, A. (2009). The rise of English: The language of globalization in China and the European Union. *Macalester International*, 22(1), 131-168.
- Klayklung, P., Chocksathaporn, P., Limna, L., Kraiwanit, T., & Jangjarat, K. (2023). Revolutionizing education with ChatGPT: Enhancing learning through conversational AI. *Universal Journal of Educational Research*, 2(3), 217-225.
- Lai, Y., Saab, N., & Admiraal, W. (2022). University students' use of mobile technology in self-directed language learning: Using the integrative model of behavior prediction. *Computers & Education*, 179, 1-13.
- Limna, P. (2023). The impact of NVivo in qualitative research: Perspectives from graduate students. *Journal of Applied Learning and Teaching*, 6(2), 271-282.
- Limna, P., & Kraiwanit, T. (2024). Refining words with AI: ChatGPT in language editing for social sciences - A graduate students' perspective. *Trends of Humanities and Social Sciences Research*, 12(2), 91-115.
- Limna, P., Kraiwanit, T., Jangjarat, K., Klayklung, P., & Chocksathaporn, P. (2023). The use of ChatGPT in the digital era: Perspectives on chatbot implementation. *Journal of Applied Learning and Teaching*, 6(1), 64-74.
- Limna, P., Kraiwanit, T., Kasrisom, A., Jangjarat, K., Asanprakit, S., & Shaengchart, Y. (2024). Generation alpha development policy and strategy in the digital era: A Thai perspective. *Rom Yoong Thong Journal*, 2(1), 93-106.

- Mhlongo, S., Mbatha, K., Ramatsetse, B., & Dlamini, R. (2023). Challenges, opportunities, and prospects of adopting and using smart digital technologies in learning environments: An iterative review. *Heliyon*, 9(6), 1-20.
- Moraes, E. B., Kipper, L. M., Hackenhaar Kellermann, A. C., Austria, L., Leivas, P., Moraes, J. A. R., & Witczak, M. (2023). Integration of Industry 4.0 technologies with Education 4.0: advantages for improvements in learning. *Interactive Technology and Smart Education*, 20(2), 271-287.
- Oliveira, H., Sanches, T., & Martins, J. (2022). Problem-based learning in a flipped classroom: A case study for active learning in legal education in international law. *The Law Teacher*, 56(4), 435-451.
- Rafiyya, A., Kraivanit, T., Limna, P., Sonsuphap, R., Kasrisom, A., & Snongtaweeporn, T. (2024). Early childhood social-emotional development: An impact on a developing country. *International Journal of Evaluation and Research in Education*, 13(5), 3081-3089.
- Rao, V. C. S. (2019). English for business purposes: An ESP approach. *Journal for Research Scholars and Professionals of English Language Teaching*, 3(15), 1-8.
- Riel, S. (2023). Demand for business English continues to grow exponentially – Learn the ins and outs of this lucrative ELT niche for teachers. Retrieved on 4, April, 2025 Searched from <https://bridge.edu/tefl/blog/teaching-business-english-resources/>
- Roshid, M. M., & Kankaanranta, A. (2023). English communication skills in international business: Industry expectations versus university preparation. *Business and Professional Communication Quarterly*, 88(1), 100-125.

Sarker, M. N. I., Wu, M., Cao, Q., Alam, G. M., & Li, D. (2019). Leveraging digital technology for better learning and education: A systematic literature review. *International Journal of Information and Education Technology*, 9(7), 453-461.

Siripipattanakul, S., Siripipatthanakul, S., Limna, P., & Auttawechasakoon, P. (2022). Marketing mix (4Cs) affecting decision to be an online degree student: A qualitative case study of an online master's degree in Thailand. *International Journal on Integrated Education*, 5(4), 31-41.

Siripipatthanakul, S., Muthmainnah, Siripipattanakul, S., Sriboonruang, P., Kaewpuang, P., Sitthipon, T., Limna, P., & Jaipong, P. (2023). Gamification and edutainment in 21st century learning. In Taslim, et.al (Ed.), *Multidisciplinary Approaches to Research* (pp. 210-219). Indonesia: Yayasan Corolla Education Centre.

Siripipatthanakul, S., Limna, P., Siripipattanakul, S., & Phuangsuwan, P. (2025). Modelling problem-based learning, student satisfaction, and effectiveness among higher education students in thailand. In M. Kayyali (Ed.), *International Academic Transformations and Cross-Border Collaborations* (pp. 311-332). USA.: IGI Global Scientific Publishing.

Timotheou, S., Miliou, O., Dimitriadis, Y., Sobrino, S. V., Giannoutsou, N., Cachia, R., Mones, A. M., & Ioannou, A. (2023). Impacts of digital technologies on education and factors influencing schools' digital capacity and transformation: A literature review. *Education and Information Technologies*, 28(6), 6695-6726.

Woodeson, K. (2022). The role of student satisfaction between TAM and intentions to use English online dictionary: A conceptual review. *Advance Knowledge for Executives*, 1(2), 1-9.

- Woodeson, K., Limna, P., & Nga-Fa, N. (2023). Students' vocabulary learning difficulties and teachers' strategies: A qualitative case study of Ammartpanichnukul School, Krabi in Thailand. *Advance Knowledge for Executives*, 2(1), 1-9.
- Xia, Q., Chiu, T. K., Chai, C. S., & Xie, K. (2023). The mediating effects of needs satisfaction on the relationships between prior knowledge and self-regulated learning through artificial intelligence chatbot. *British Journal of Educational Technology*, 54(4), 967-986.
- Yan, L., & Moorhouse, B. L. (2023). Teaching with technology in the post-COVID-19 pandemic digital age: An interview with Professor Robert Godwin-Jones. *RELC Journal*, 54(2), 483-488.