

# Investigating the E-Learning Needs of ESL Learners in Digital Learning Platforms

\*Sazirah Jaafar<sup>1</sup>, Edwina Ivy Anthonius<sup>2</sup>, Norazrina Ag-Ahmad<sup>3</sup>, Jenna Desiree Robert<sup>4</sup>, Nurul Natasha Nor Aziz<sup>5</sup>

<sup>1234</sup>Akademi Pengajian Bahasa, University Technology MARA (UiTM) Cawangan Sabah, Kampus Kota Kinabalu, Beg Berkunci 71, 88997 Kota Kinabalu Sabah, Malaysia,

<sup>5</sup>Akademi Pengajian Bahasa, University Technology MARA (UiTM) Cawangan Negeri Sembilan, Kampus Kuala Pilah, Pekan Parit Tinggi, 72000 Kuala Pilah, Negeri Sembilan, Malaysia

\*Corresponding Author

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## ABSTRACT

This study was conducted to identify students' e-learning needs and to determine gaps in the existing e-learning platforms used for learning English as a second language (ESL) at Universiti Teknologi MARA (UiTM) Kota Kinabalu and UiTM Kuala Pilah. The issue addressed in this research is that although e-learning platforms have become an integral component of language instruction, many students experience reduced engagement due to a lack of interactive and communicative learning features. The objectives of this study were to identify the e-learning features that students perceive as most useful for language learning and to examine students' perceptions of the advantages of using digital platforms to support ESL learning. A needs analysis survey was administered online to 198 respondents across various academic programmes at both campuses. The survey explored students' experiences with current platforms, focusing on areas such as interactivity, engagement, and perceived advantages of online learning. Descriptive statistics were employed to summarise students' responses and determine common patterns in their needs and preferences. The findings highlighted that students expressed stronger preferences for platforms that incorporate interactive elements such as real-time feedback, multimedia learning, collaboration, and task-based activities. The analysis also indicated that students would benefit more from an environment that provides ample opportunities to practise the language and engage with interactive lessons. These results suggest the importance of enhancing e-learning systems with more dynamic, participatory, and communicative features to better support learner engagement and improve ESL learning outcomes.

**Keywords:** (e-learning, needs analysis, ESL learners, e-learning features, digital learning platforms)

## INTRODUCTION

The rapid digital transformation in higher education has reshaped the nature of teaching and learning, particularly in the field of English as a Second Language (ESL). E-learning has emerged as a central modality in universities worldwide, offering flexible access to learning resources, opportunities for self-paced study, and expanded exposure to multimodal content (Dhawan, 2020). In the Malaysian higher education context, Universiti Teknologi MARA (UiTM) and other public universities have increasingly integrated e-learning platforms into language instruction to support students' communicative competence and independent learning skills (Ministry of Higher Education Malaysia, 2021). However, the mere availability of digital platforms does not guarantee effective learning outcomes. The pedagogical quality, interactivity, and relevance of e-learning features play a significant role in influencing learners' motivation and engagement (Zhu, Yu, & Riezebos, 2016).

Recent research indicates that many e-learning systems in language education remain heavily content-driven, with limited opportunities for interaction, communication, and real-time feedback, all of which are crucial for meaningful language acquisition (Rashid & Asghar, 2016). Static learning environments may reduce learner engagement and restrict opportunities to practise language skills authentically. This aligns with challenges observed among Malaysian ESL learners who often require more interactive, communicative, and practice-oriented learning support (Muhamad & Goh, 2022). Therefore, identifying students' actual needs and preferences regarding e-learning features is essential for improving platform design and instructional strategies.

This research is also aligned with the United Nations' Sustainable Development Goal 4 (Quality Education), which emphasizes the importance of equitable access to high-quality, technology-supported learning environments to promote lifelong learning and skill development (United Nations, 2020). The study addressed the following research questions:

1. Which e-learning features do students find most helpful when using online English language learning platforms?
2. How do students perceive the usefulness of the digital tools and features available on these e-learning platforms?
3. What advantages do students perceive from using e-learning platforms to support their English language learning?

## LITERATURE REVIEW

### Digital Learning in Language Education

The key transformative features of electronic learning such as digital storage, cloud-based access and cross-platform accessibility, has made education accessible and flexible more than ever before. To capture the definition of e-learning, in essence, refers to the integration of digital technologies in the method of education. In the context of English as a Second Language (ESL), it is the utilisation of these various digital technologies like online platforms and tools in the teaching and learning of the English language.

E-learning has prominently evolved over the years, significantly marked with the rise of the internet in the 1990s until 2000s. Now after two decades, electronic learning has proliferated with the assistance of recent technology advancements. Computer-Assisted Language Learning (CALL), mobile-assisted learning, and multimedia resources usage have positively re-shaped the language learning landscape (Asad et al., 2020). A range of studies conducted exploring substantial areas of e-learning with the objective of understanding its effectiveness, and its scope for innovation in education as a whole and in the specialized domain of English language teaching and learning. Students' perspectives on the use of e-learning in classrooms are also widely explored to better understand their adaptability and familiarity with it.

### Application and Efficiency of Digital Learning Platforms

Yumnan (2021) examines the effectiveness of using Learning Management System (LMS) like Google Classroom, video-sharing platform like YouTube, and social media like WhatsApp and Facebook in ESL classrooms and points out that using these platforms increases the learners' learning motivation, encourages classroom creativity and enhances critical thinking skills. In contrast to standardised pedagogy that confines teaching to real-time or synchronised instruction, technology enhanced learning is all about flexibility and continuous adjustments. Then, a study from Qizi (2024) confirms that combining synchronous and asynchronous learning can help in raising students' engagement and achievement when they combined Google Classroom and Project-Based Learning (PBL). The paper examines the impact of the hybrid method on learning success of ESL university students in Uzbekistan. The 2024 research by Qizi is among some of the studies that study the flexibility of digitised learning which nourishes its continuous novelty and improvement.

An in-depth review of the literature and case studies by Siumarlata (2024), on the other hand, focuses on the advantages and disadvantages of the adoption of diverse types of digital tools (language apps, online classrooms, interactive digital media, and AI-based tutoring systems) in ESL learning. The results show that

technology-related learning increases students' engagement and motivation during the learning process, through their interactive nature, and plays an important role in the students' memory level for the material they must retain. The article also talks about technology being the medium that gives instant feedback for learners and this is reiterated by Kukulska-Hulme & Viberg (2017) who put forward the view that mobile technology encourages instant feedback and supports individualised learning opportunities for the learners. Immediate feedback is an important factor that is beneficial for a quick language development as it greatly assists learners with the ability to evaluate and correct themselves and adapt learning strategies in time.

However, these benefits are not without their challenges. Teacher training deficiency and student adjustment issues are two of the major barriers to efficient deployment of AI in ESL settings among the systematic investigation by Sharifuddin and Hashim (2024). Nhan (2024) also explores the negative impacts of online ESL environments including reduced social interaction and varying levels of digital literacy, which can offset some of the advantages in flexibility and engagement in e-learning environments. However, digital learning still holds promise for enhancing teaching and learning as technology evolves and continued progress is made to alleviate some of the barriers that remain.

### **Influence of Conventional Classroom on ESL Learner's Digital Learning Perception**

Traditional classroom settings have a significant impact on ESL students' attitudes towards digital learning. Passive learning and memorisation of materials had been institutionalised in conventional settings which in turn resulted in the non-involvement of the students in the lesson. Leong et al. (2019) explained that instructional methods focused on teacher-centric explanations accompanied by regular assessment may lead students to distance themselves from the content. Nevertheless, traditional method may result differently when it is blended with technology and other online or mediated resources, albeit in a slightly altered set up, students may recognise the benefit of interactive multimedia tools that indeed show them an application of the language in the real functioning world (Morat et al., 2017). This exposure raises students' awareness about the relevance of these materials to their linguistic and professional growth, expanding their working base of English and contributing to the interaction with digital learning systems.

Also, the rapidly evolving requirements of the current learning landscape particularly post-COVID-19, have highlighted the advantages of digital learning approaches compared to more conventional training techniques. By presenting a more student-centred learning environment, the concept of flipped classroom enables ESL students to engage themselves with the content at their own pace such that in-class language abilities (speaking, reading) can be improved along the application of acquired knowledge (Othman & Rahman, 2023). These kinds of creative solutions fit an array of learning needs and aid in decreasing the redundancy that sometimes associated with traditional classrooms. Particularly in the context of digital storytelling, Tatli et al., (2022) research has demonstrated that those students who have experienced an interactive and multimedia learning environment improved in motivation and engagement in language studies and then achieved efficiency in their language learning. Therefore, it is the contrast between obsolete conventional approaches and state-of-the-art digital tools that enables ESL students to conceive of digital learning as highly effective in facilitating the learning process of a language.

Finally, more insight into the role of social media as an informal learning tool makes ESL students even more positive regarding digital learning. With the help of some tools (Facebook, Padlet), students can develop language skills in less formal but more enjoyable atmosphere and becoming more comfortable and confident in using English in daily life (Murad, 2023; Rashid et al., 2019). It has been found that among ESL learners, those who use social media have raised motivation and developed an improvement in speaking skills (Manogaran & Sulaiman, 2022). Thus, limited traditional educational environment (less motivated, examination focused nature of learning, as well as its limitation to demonstrate life applications) facilitates student's adaptation to technology in learning. By integrating these resources within the traditional framework, ESL teachers can build a language learning setting that meets the needs of today's language learners and allows students to develop into independent, adaptable learners.

## Needs Analysis for Designing Effective Digital Learning Platforms

The development of effective digital learning platforms is based on needs analysis that in turn produces educational experiences suitable for the specific needs of ESL students. Thus, a needs analysis serves as a systematic method for exploring the specific requirements of students, constituents, and contexts related to developing effective digital learning environments. Traditional classrooms may not be able to accommodate the adaptability and manageability required to meet different learning objectives, leading to increasing demand for electronic solutions that are able to handle these challenges. Sharp (2018) asserts that learner-centred design for digital learning environments is important because it allows adult learners to take an active role in their education, resulting in a more personalised learning experience that corresponds to the way they learn and their own goals. Thus, with insight on the opinions from the students, in an early process of the design, their needs, we create platforms that involve them and promote efficient language development.

In the area of digital education, this process involves collecting and analysing data as well as knowing how to design an instructional technology that is sensitive to the learner's profile, their skills and the gaps in their knowledge. This approach focuses on what students want (which is essential if there is any hope of creating instruction that is both relevant and interesting, and that "works" for different audience members) (Blankenbeckler et al., 2014). Such assessments assist in understanding the contexts in which students do well, and hence in the creation by instructional designers of digital learning environments that optimise user engagement and thus, in the end, learning outcomes.

A needs-based approach that aligns educational methods and digital resources with students' needs is especially important. As Ritzhaupt et al., (2015) indicate, instructional designers are required to research existing knowledge gaps and locate the challenges encountered by learners to ensure the design effort is directly focusing on these issues. Through qualitative and quantitative data from users, educational stakeholders can take informed decisions about the most relevant features, content and visit strategies for the learning objectives or users' needs and expectations. This dynamic process allows for continually optimising digital learning tools to enhance efficacy and use of these tools Perestelo-Pérez et al., 2020.

Additionally, digital educational environment design should be in line with affordances of technology tools for the classrooms. Stressing that educational objectives should be aligned with capacities of digital technologies that can enhance user experience and learning outcomes, Barros (2023) echoed this. How well ESL students engage with digital learning materials may depend largely on a careful consideration of the technological affordances: multimedia presentations, interactivity, and collaboration tools. These technologies work in tandem to provide an interactive learning situation not possible in a traditional classroom. Teachers may construct environments that facilitate increased engagement and interaction, by focusing on certain affordances relevant to ESL learning and result in increased levels of language ability and learner confidence.

Lastly, needs assessments are important to promote cooperation between all involved and to develop a shared understanding of what we hope to teach and how that will be measured. There is a need to encourage educators, administrators, and learners themselves to help get rid of the silos, and in doing so, offer a complete picture of the learning landscape in a manner that digital learning systems augment not just learning achievement, but also the socioemotional capacity for engagement and growth (Moralista & Oducado, 2020). As Huber and Ravi (2021) highlight, it is important that digital platforms represent the actual learning experiences and goals of their users and this collaborative approach supports closing gaps between traditional educational practices and creative opportunities offered to us by technology. Needs analysis clear the way for a successful development of digital learning spaces ideally adjusted to the current educational environment.

## METHODOLOGY

### Research Design

This study used a quantitative descriptive design using a survey method to systematically assess students' needs in digital learning platforms. Survey research provides a numerical description of trends, attitudes, or



opinions within a population by analysing a representative sample (Creswell & Creswell, 2018). It typically involves cross-sectional or longitudinal studies utilizing structured questionnaires or interviews, aiming to generalise findings to a broader population. Given that this study serves as a preliminary needs analysis, a cross-sectional survey will be used to collect data at a single period of time, capturing students' current digital use and perceptions of digital tools such as mini-games and instructional videos. The structured nature of the survey ensures objective and measurable data collection, enabling statistical analysis and identification of trends that will offer foundational insights for the development of future digital learning interventions and inform future research on digital hub.

## Participants

The study included students who are enrolled at Universiti Teknologi MARA (UiTM) Sabah branch and UiTM Seremban branch (Kuala Pilah Campus) who are taking English Language Course (ELC) or Language for Communicative Competence (LCC) courses. A convenience sampling method was used to recruit **198 participants**, ensuring that the sample represents students with varying levels of familiarity with digital learning tools. Participants must meet the following inclusion criteria: (1) active enrolment in an ELC/LCC course and (2) willingness to participate in the survey. Students who do not meet these criteria were excluded from the study. A total of 198 students were randomly selected of which 36.7% students were males and 63.3% were females. Their age ranged between 18 to 24 years old.

Determining an appropriate sample size is essential for ensuring the validity and generalizability of research findings. Krejcie and Morgan (1970) developed a widely used table to guide sample size decisions. According to their table, for a population of 2000 students, the recommended sample size is 322 to achieve a 95% confidence level with a 5% margin of error. Similarly, Wimmer and Dominick (2005) support this calculation, emphasizing that a sample of this size ensures reliable statistical representation.

However, given the preliminary nature of this study, which aims to conduct an initial needs assessment of students' e-learning use and preferences, 198 respondents can still yield valuable data to identify key trends and inform future research while ensuring feasibility in data collection. The survey method was selected as the most appropriate approach for gathering insights from a broad student base efficiently. Questionnaires were distributed electronically via email and messaging platforms such as Telegram and WhatsApp to ensure ease of access and maximise response rates.

## Data Collection

### E-Learning Needs Analysis Survey

The primary data collection tool was a self-administered online questionnaire, designed based on validated survey instruments from existing needs analysis research in language learning and e-learning such as the E-Learning Needs Tool by Azimi (2013). Some items were added to measure perceived usefulness of e-learning features of the learning platforms for students. The needs analysis questionnaire for students has three sections: Part A which was on Demographic Information, Part B which elicited information on the e-learning features that they find the most helpful, and Part C which was intended to find out the advantages of using e-learning features and platforms. The survey consists of a mixed-format questionnaire, incorporating yes/no questions, demographic details, and a 5-point Likert scale (ranging from 1 = Not useful at all to 5 = Very useful). This combination allows for a detailed assessment of students' digital learning behaviour, preferences, and perceived usefulness of digital tools, ensuring both categorical and ordinal data collection for a comprehensive analysis.

The survey was bilingual, using English language and Bahasa Melayu (national language of Malaysia) to be more understandable and for easy answering. Before piloting the instrument, the tool was scanned and reviewed with the help of two reviewers who were experts in both English language and Bahasa Melayu; and involved in the field of education, English language pedagogy and e-learning.

A pilot test was carried out to determine item reliability of the items measuring the intended constructs. Out of the original 23 items, only 19 items were retained, as 4 items were omitted during the expert review process due to their lack of relevance to the research objectives. The pilot test yielded a Cronbach's alpha value of 0.78. According to the Cronbach's Alpha Reliability Classification Index, this value indicates an acceptable level of reliability; therefore, no changes were made to the items (Pallant, 2002; Sekaran, 2003).

## Data Analysis

The online survey was open for one week, from 14 April 2025 to 20 April 2025. Upon completion of data collection, the responses were first examined for completeness, and any questionnaires with substantial missing data were excluded from analysis. The cleaned dataset was then coded and imported into the Statistical Package for the Social Sciences (SPSS) software for analysis.

Descriptive statistical analyses, including frequency counts, percentages, means and standard deviations, were carried out to summarise respondents' demographic profiles, online learning habits, and perceived usefulness of various e-learning features and platforms. These descriptive measures helped provide an overview of general trends and patterns in students' e-learning experiences and needs.

For the Likert-scale items measuring perceived usefulness of e-learning features, mean score interpretations were used to determine overall levels of perceived usefulness. Higher mean scores reflected greater usefulness, while lower mean scores indicated limited perceived value of the respective features.

## Ethical Considerations

This study was conducted in accordance with ethical research guidelines to ensure the protection of participants' rights and confidentiality. Approval was obtained from the Research Ethics Committee, Universiti Teknologi MARA (UiTM) (REC/03/2025 (ST/MR/56), on 27 March 2025. Participants were informed about the purpose of the study, and their participation was voluntary, with the option to withdraw at any time. Data collected remained anonymous and was used solely for research purposes.

## FINDINGS AND DISCUSSION

### RO1: Most Helpful E-Learning Features for English Language Learning Platforms

In this study, the students are revealed to have clear preferences for interactive and engaging e-learning features with the highest being game-based learning ( $M = 4.36$ ) and interactive quizzes ( $M = 4.20$ ), followed by short videos ( $M = 3.87$ ) and learning dashboards ( $M = 3.74$ ). This shows students appreciate features that are interactive, involve active participation and visually stimulating. Contrastively, features like digital flashcards ( $M = 3.59$ ), online forums ( $M = 3.56$ ), and online feedback ( $M = 3.48$ ) received lower preferences, suggesting that these elements are either underutilised or less interactive. As mentioned by Kukulska-Hulme & Viberg (2017) (as cited in Siumarlata, 2024), learning features related to technology that allow students to actively participate in their learning including games and quizzes that provide quick results and immediate responses, support students' ability to evaluate their learning progress and help them to adopt suitable learning strategies according to their pace and preferences. Therefore, this aligns well with the findings from Rashid and Asghar (2016), who affirmed that learner engagement increases when opportunities for real-time interaction and feedback are incorporated in e-learning tools.

### RO2: Perceptions of Students on Digital Tools and Features' Usefulness

The findings indicate that students generally perceive the digital tools as both accessible and useful. A majority of respondents (91.4%) highlighted technological access as a key factor that enables them to make effective use of these tools. Additionally, 64.6% agreed that the platform provided more opportunities to practise English, suggesting that the tools support language development. Furthermore, 56.4% of students reported that the interactive features were particularly beneficial in enhancing engagement and learning experience. The

findings align with the literature that ESL learners thrive in platforms that encourage collaboration, task-based learning, and authentic language practice (Muhammad & Goh, 2022). Additionally, the results not only discovered the beneficial features that students find the most helpful but also exposes students' awareness about the increasing relevance of the digital features to their English language development, which agrees with Morat et al., (2017) who suggests that students in the current learning landscape are recognising the advantages offered by digital learning platforms that support the use of English language in the real-life contexts.

### **RO3: Perceived Advantages of Using E-Learning Platforms in English Language Learning**

Majority of the respondents agreed that e-learning provides flexibility (69.7%), allowing them to learn their own pace. More than half (52%), also perceived that e-learning encourages self-directed learning, reflecting a moderate learner autonomy. Furthermore, 53% of respondents valued immediate feedback, emphasising that responses enhance motivation and reinforces ESL learning. E-learning platforms are therefore valued for being convenient and learned-centred, and improvements can be applied to guided learning and feedback mechanisms. Thus, this supports the assertions by Dahwan (2020), Zhu, Yu, and Riezebos (2016) that feedback and flexibility are crucial elements that sustain engagement and effectiveness in online learning environments. Contrasting with more structured, conventional approaches, which often resulted in students not being involved in the lesson, the flexibility and response immediacy of digital learning provide students with control and choice in personalising their learning experiences (Sharp, 2018). This implies that the features of e-learning platforms can cultivate students into becoming independent and adaptable learners.

## **CONCLUSION**

With the aim of fully leveraging the potential of e-learning and achieving its maximum effectiveness, this study aimed to identifying students' actual needs and preferences towards the essential digital features, specifically in the context of ESL learning at Universiti Teknologi MARA (UiTM) Kota Kinabalu and UiTM Kuala Pilah. To address the issue of reduced engagement due to lack of interactive and communicative learning features, the objectives of this study were focused to identify the e-learning features that students perceive as most useful for language learning and to examine students' perceptions of the advantages of using digital platforms to support ESL learning.

This study revealed that UiTM ESL learners value the accessibility and flexibility of e-learning platforms and express a need for prompt and comprehensive feedback, increased interactivity, and opportunities for language practice. The findings indicate that students demonstrate a strong preference for features such as game-based learning and interactive quizzes, which provide both interactivity and immediate responses. These features, in turn, foster student engagement and promote self-directed learning. The ease of access afforded by digital platforms further enhances their potential to support language development, highlighting the importance of designing e-learning environments that are more than static, content-driven tools. This highlights the need for educators and stakeholders to integrate communicative, 21st-century, game-based tools that facilitate authentic engagement and enhance English language proficiency.

Hence, the findings of this study could provide a recommended guidelines in creating an engaging e-learning platforms with features that are preferred by students, that could enhance their language development through meaningful interactions and instant response and feedback. However, digital learning is not intended to fully substitute established classroom-based methods, but rather to complement it. Aligning with the United Nations' Sustainable Development Goal 4 (Quality Education), which emphasises the importance of technology-supported learning environments (United Nations, 2020), an effective e-learning platforms, could be integrated seamlessly with the traditional framework of education to maximise student engagement, support autonomous learning, and reinforce language development through authentic, interactive experiences.

By combining the flexibility and immediacy of digital tools with the structured guidance of classroom instruction, educators can create a blended learning environment that caters to diverse learning preferences while maintaining pedagogical rigor. Such an approach ensures that students benefit from the strengths of both

digital and conventional methods, fostering not only language proficiency but also critical thinking, collaboration, and self-directed learning skills.

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## Data Availability

The data that support the findings of this study were collected from student participants through an online needs analysis survey. These data are not publicly available to protect the privacy and confidentiality of the student respondents, in accordance with the ethical approval granted by the Research Ethics Committee, Universiti Teknologi MARA (UiTM) (REC/03/2025 (ST/MR/56)). Access to the anonymised data can be provided by the corresponding author upon reasonable request, subject to institutional and ethical guidelines. Researchers requesting access may be required to submit formal request detailing the intended use of the data.

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