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Using Digital Tools in Teaching and Learning English: Delving into English Language Teachers' Perspectives

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Abstract

The use of English as a medium of instruction has become prevalent worldwide. The current world has witnessed the proliferation of technology in various fields, including education. This systematic literature review explored English language teachers' perceptions of using digital tools in teaching and learning, as well as the challenges they face in this context. Following the PRISMA framework, 24 out of 476 articles were screened from Scopus and Web of Science (WoS). The review discovered that the English language teachers, in general, displayed positive perceptions regarding the use of digital tools in teaching. Computer readiness, beliefs about technology, training and support, prior experience, attitudes towards innovation as well as the perceived benefits and challenges shape teachers' overall perception. On the other hand, past studies on the challenges identified encompass a lack of training and knowledge, technical issues and limited access, institutional support and policies, time constraints and preparation, student readiness and engagement, digital competence and pedagogical skills, resource and guideline limitations and external interference. In view of the transformative role that technology plays in language learning outcomes, the effectiveness of varied digital tools in honing specific language skills or content is regarded as an area worth exploring, along with comparative studies on perceptions towards integrating digital tools among different groups of students and teachers. It is hoped that the findings of this study could provide valuable insights into the use of digital tools and their impact in the context of English teaching and learning, benefiting teachers and education stakeholders alike.

Keywords

Digital Tools, Teaching English, English Teaching and Learning, Teachers'

Perspectives, English Language Classroom

1. Introduction

English has been generally recognized as one of the most extensively used and preferred languages in the context of cultural globalisation (Laura-De La Cruz et al., 2022). In recent years, the implementation of English as a medium of instruction has become more prominent in the educational systems worldwide, as observed across various countries, including those where English is considered a second language (Visaltanachoti et al., 2021). This trend is particularly noticeable in developing nations such as Indonesia and the Philippines, where educational institutions and policymakers have taken proactive measures to integrate English into the curriculum across different academic levels. Its adoption as a medium of instruction is driven by the belief that language proficiency equips learners with skills that are highly valued in the global job market as an effort to improve socio-economic mobility and international competitiveness (Maramag-Manalastas & Batang, 2018). In fact, a survey conducted among United Nations members revealed that most of its samples expressed approval for adopting English as the language used in their embassies (Ortiz, 2013 as cited in Laura-De La Cruz et al., 2023).

On the other hand, the connection between technology and learning has become increasingly evident in recent years when educational technologies are introduced in various sectors, including industry, charity, health and education, particularly to enhance the learning process. Traditional teaching methods are deemed to be less successful in capturing students' interest, vis-a-vis causing a decrease in learning engagement (Patra et al., 2022). The lack of innovative and imaginative approaches poses a notable challenge in maintaining students' active involvement in class (Kamarulzaman et al., 2018). Therefore, incorporating technology into both in- and out-of-class has allowed English language learning to become more relevant since a population well-versed in technology is important for a country's sustainable and successful development (Mullis et al., 2012).

The fact that the present society is surrounded by technology indicates that it encourages the incorporation of technology in education. Nahar et al. (2021) pointed out that in accordance with the 21st-century learning paradigm, it is crucial for educators to prioritize approaches that promote active learning. As technology continues to evolve, teachers may need to be updated with the knowledge of using digital tools that enhance teaching and learning. In fact, the competency of incorporating these digital tools into their instructional design, ensures that they are aligned with effective pedagogical practices. As highlighted by Batjo and Ambotang (2019), students' reception in classrooms depends on teaching quality. Ultimately, teachers should leverage their expertise in technology, pedagogy, and content to facilitate learning and achieve course objectives

(Mucundanyi & Woodley, 2021). Avelino and Ismail (2021) also suggested the development of a theoretical framework based on the Technology Acceptance Model 3 (TAM3) to measure ESL teachers' knowledge and readiness in incorporating 4IR technologies into their teaching.

Moreover, by utilizing technological tools, language learners can personalize learning experiences according to their strengths and limitations, leading to maximum results. The availability of numerous online resources provides students with ample opportunities for independent learning (Mishra et al., 2020). Since educators are encouraged to steer away from traditional teaching methods and prioritize approaches in line with the 21st-century learning paradigm (Nahar et al., 2021), it will be significant to figure out ESL teachers' perspectives on the use of digital tools in English language classrooms.

Teaching the Millennials requires ESL teachers to adopt more innovative approaches (Hamari et al. 2014; Salmee & Abd Majid, 2022). Thus, using digital tools in ESL classrooms is likely to enhance the teaching and learning environment. However, to effectively implement these technologies in classrooms, ESL teachers must possess necessary knowledge and accept such technologies. As teachers are the backbones of education, it is essential to comprehend teachers' perspectives on the use of digital tools as it may bring impacts to their instructional and motivational practices as well as their interactions with students (Indiran et al., 2022).

Also, there was a significant surge in the use of digital tools among teachers ever since during the home-based learning (HBL) period necessitated by COVID-19 pandemic, thus, raised an interest to assess studies done on ESL teachers' perception of using digital tools to enhance their students' language learning and knowledge development. A comprehensive, systematic review of articles focusing on the use of digital tools in English language classrooms was regarded as an effective approach in gaining a more in-depth understanding of ESL teachers' perspectives across the globe. In view of that, this systematic literature review (SLR) was conducted to explore their viewpoints on the use of digital tools, which include online tools, artificial intelligence (AI)-powered tools and virtual and augmented realities, among others, in the teaching and learning of the English language. The objective of this SLR is to explore perceptions on the use of digital tools among ESL teachers, its effectiveness, and its feasibility. The research questions are as followed:

1) How do ESL teachers perceive the use of digital tools in teaching and learning of English?

a) What are factors that lead to their perception?

2) What are the challenges of using digital tools in an ESL classroom, as perceived by teachers?

2. Methodology

This section discusses the method used to retrieve articles related to the use of digital tools among ESL teachers. This SLR employed comparative research me-

thodology, in particular, descriptive comparison. The Preferred Reporting Items for Systematic Review and Meta-Analyses (PRISMA) which comprises four processes, i.e., identification, screening, eligibility, and inclusion (Moher et al., 2009), was adapted to carry out this review (Figure 1). PRISMA is a collection of programs designed to assist researchers in preparing and reporting different systematic reviews and meta-analyses and has been widely used in SLRs owing to its comprehensiveness and adaptability to different studies (Trifu et al., 2022).

2.1. Identification

The study started with the process of identifying relevant literature using two databases, namely, Scopus and WoS. Scopus is a database which covers approximately 36,377 titles of diverse subject areas, of which 34,346 are peer-reviewed journals, from nearly 11,678 publishers. Whereas WoS is the world's oldest, most extensively used, and reliable database of research publications and citations (Birkle et al., 2020), which comprises more than 34,000 journals.

At this stage, terms, synonyms, and variations of the key terms related to the study, viz. "reading motivation" and "English as a second language" were identified to ensure these terms indicate the constructs intended to be reviewed. The search strings used in this study for each database used were shown in Table 1. The searches spanned from database inception until 2023 which included all document types, viz. journal articles, review papers, conference proceedings and research reports. As a result, 310 studies were retrieved at this stage via Scopus and 166 studies were obtained through WoS, making up a total of 476 articles.

2.2. Screening

The screening process took place after the articles were obtained from the Scopus and WoS. It is a process of identifying past studies from the literature search to be included in the current review. At this phase, first, duplicated articles were identified, resulting in the removal of 51 articles. Subsequently, the articles were

Table 1. Search strings used in the study.

Database	Search string
Web of Science (WoS)	TS = (("Teachers' perspective*" OR "teachers' view*" OR "teachers' motivation" OR "teachers' willingness" OR "Teachers' attitude" OR "teachers' perceptions") AND ("English" OR "ESL" OR "English as second language" OR "EFL" OR "English as foreign language") AND ("digital tool*" OR "technology" OR " online tool*" OR "AI" OR "artificial intelligence" OR "machine learning"))
Web of Science	TITLE-ABS-KEY (("Teachers' perspective*" OR "teachers' view*" OR "teachers' motivation" OR "teachers' willingness" OR "Teachers' attitude" OR "teachers' perceptions") AND ("English" OR "ESL" OR "English as second language" OR "EFL" OR "English as foreign language") AND ("digital tool*" OR "technology" OR "online tool*" OR "AI" OR "artificial intelligence" OR "machine learning"))

screened by years, language and type, thus, keeping only research studies published using English language between 2019 and 2023. The period of the literature retrieved was also set to ensure the review result would be up to date. All texts other than journal articles, were excluded. Only full-text articles with open access were selected. As a result, at this stage, there were a total of 81 articles which were deemed relevant were shortlisted.

2.3. Eligibility

Subsequently, the remaining 81 articles were meticulously screened. The abstract and keywords of each article were scrutinized to maintain the relevance and quality of the academic literature included in the review process. Only empirical studies which focused on the in-service ESL teachers' perceptions and views on the use of digital tools were selected.

2.4. Inclusion

Based on the inclusion and exclusion criteria depicted in Table 2, eventually 24 articles were chosen for the current review. Only empirical papers published between 2019 and 2023 were selected. Furthermore, papers in languages other than English were excluded. Only studies which were relevant to the perspectives of in-service English teachers on the use of digital tools were reviewed.

Upon going through the four stages, namely identification, screening, eligibility and included, in the systematic review process (Figure 1), the selected articles were reviewed. Attention was given to research studies which depicted vivid relevance to the research questions. For every article, the abstract was first skimmed once again, followed by meticulous reading of the article to identify the findings that went in line with the research objectives.

3. Results

As depicted in Table 3, among the 24 studies analysed, 6 used a qualitative methodology, whereas 9 studies combined qualitative and quantitative approaches. The other remaining 9 studies employed quantitative analytical methods. In

Table 2. Inclusion and exclusion criteria.

| Criterion	Inclusion	Exclusion
Timeline	Research studies published between 2019-2023	Research studies published before 2019
Document type	Empirical papers from journals	Systematic review, books, reports, conference proceedings, book chapters.
Language	English	Non-English
Scope	Related to in-service English teachers' perspectives on the use of digital tools	Irrelevant to English learning and teaching, non-English teachers' perspectives, pre-service teachers' perspectives, learners' perspectives
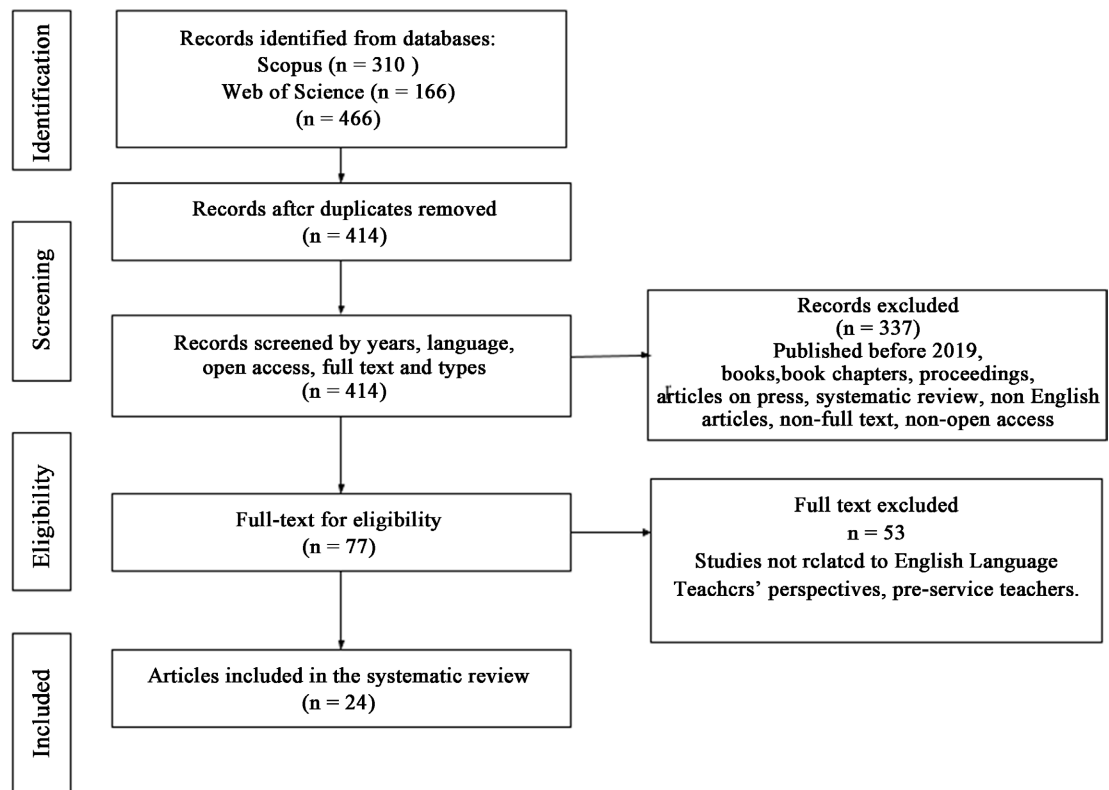
Figure 1. The flow diagram of the study (Adapted from Moher et.al, 2009).

Table 3. Distribution of articles according to the year of publication, research method and education setting.

Year	Number of articles	Research method		Setting	
2019	6	Quantitative	3	Primary	0
		Qualitative	1	Secondary	1
		Mixed method	2	Tertiary	4
				Various	1
2020	4	Quantitative	2	Primary	1
		Qualitative	1	Secondary	0
		Mixed method	1	Tertiary	2
				Various	1
2021	3	Quantitative	2	Primary	0
		Qualitative	0	Secondary	2
		Mixed method	1	Tertiary	1
				Various	0
2022	10	Quantitative	2	Primary	0
		Qualitative	4	Secondary	2
		Mixed method	4	Tertiary	3
				Various	5
2023	1	Quantitative	1	Secondary	1

terms of publication years, 1 study was published in 2023, 10 articles were published in 2022, 4 articles were published in 2021, 3 studies were published in 2020 whereas 6 articles were published in 2019.

In addition, as shown in Table 3, a total of 10 studies focused on the English language teachers teaching the learners in tertiary institutes, 6 studies on the secondary schools setting, one on the primary school, 1 on primary and secondary school and 7 studies involved teachers teaching in various education settings.

The articles retrieved also comprised studies conducted in diverse nations, with Asia whereby English is often regarded as the second or foreign language as the main region, as illustrated in Table 4. There was one study each being carried out in Algeria, Egypt, Iran, Jordan, Poland, Spain, Turkey, and UK. Meanwhile, 1 study involved teachers teaching in Lebanon, Libya and Syria whereas one comprised teacher from different nations. Four studies were conducted in Malaysia, three each in China and Saudi Arabia and two each were executed in Indonesia and Vietnam.

The integration of digital tools in English language teaching has witnessed a significant shift in recent years, driven by the transformative impact of technology on educational practices. Therefore, understanding the perceptions of English language teachers regarding the use of digital tools in teaching and learning is crucial for informing effective pedagogical strategies. Based on the review, it was discovered that most teachers in 19 studies perceived the use of digital tools positively. For instance, albeit being rather unfamiliar with Chatbots and

Table 4. Distribution of articles according to country.

Country	Number of articles
Malaysia	4
China	3
Saudi Arabia	3
Indonesia	2
Vietnam	2
Algeria	1
Egypt	1
Iran	1
Jordan	1
Poland	1
Spain	1
Turkey	1
UK	1
Lebanon, Libya, Syria	1
Various countries	1

Augmented Reality (AR), secondary teachers in Malaysia acknowledged its benefits which could be included in their teaching process and showed willingness to integrate them in their lessons (Chuah & Kabilan, 2021; Salmee & Majid, 2022). On the other hand, most of the teacher participants in 3 out of 24 studies exhibited negative perceptions on digital tools (Abugohar et al, 2019; Foltyn & Polok, 2022; Kim Anh, 2022). There are also studies which focused on how teachers perceived online teaching, deficiency in terms of technical support provided and digital literacy knowledge the teachers possessed had impeded them from being supportive to the use of digital tools (Kim Anh, 2022; Foltyn & Polok, 2022). Furthermore, it was also discovered that the teacher's perception was rather significantly correlated with their digital literacy skills (Afrilyasanti et al., 2022; Meirovitz et al., 2022). Teachers with higher levels of digital literacy skills demonstrated more positive perceptions on the use of digital tools in the classrooms.

4. Discussion

The rapid advancement in technology in the present era has welcomed infinite possibilities for the use of digital tools to enhance educational experiences. Hence, it is crucial for teachers to explore and optimise the potential of technology at establishing learning environments which fulfill the needs and expectations of today's learners who regard technology as an indispensable tool that allows them to access vast amounts of information, collaborate with peers and engage with learning content in dynamic and interactive ways (Mucundanyi & Woodley, 2021). The current review has sought to systematically analyse the existing literature on ESL teachers' perspectives on the use of digital tools in their teaching. A scrupulous review garnered from two databases has brought about 24 articles related to the research objectives.

RQ1: ESL teachers' perceptions on the use of digital tools in teaching and learning of English and factors that lead to their perceptions

The review discovered that ESL teachers are generally positive about the use of digital tools in their teaching. Four main factors that contribute to teachers' perceptions were identified. It was revealed that English language teachers' computer readiness and their beliefs about technology significantly influence their perceptions of using digital tools. Teachers with higher levels of computer readiness and positive beliefs about technology are more likely to perceive digital tools as beneficial for language teaching (Canals & Al-Rawashdeh, 2019; Kim Anh, 2022; Foltyn & Polok, 2022). Teachers who had prior experience and better familiarity with digital tools demonstrated a higher level of confidence in incorporating them into their teaching. It is regarded that teachers equipped with sufficient digital knowledge were more likely to incorporate their knowledge of digital tools effectively, which would eventually lead to better teaching practices and student engagement (Palacios-Hidalgo et al., 2020; Afrilyasanti et al., 2022; Meirovitz et al., 2022).

Besides, the amount and context of training teachers received in the use of technology for language instruction has proven to play a crucial role in shaping their perception and their endeavour to integrate digital tools in their lessons. It is important to note that the availability and quality of training programs, administrative support and technical assistance would influence teachers' perceptions of digital tools (Canals & Al-Rawashdeh, 2019; Önalan & Kurt, 2020). With adequate training and support that empower teachers to effectively integrate digital tools into their teaching practices, positive perception on the integration would follow suit because the higher the familiarity the teacher with digital tools is, the higher their level of confidence in using digital tools (Huang et al., 2019; Önalan & Kurt, 2020; Afrilyasanti et al., 2022; Meirovitz et al., 2022).

On top of that, it was contended that teachers' attitudes towards innovation and their willingness to experiment with new teaching methods significantly influenced their perceptions of digital tools. Compared to teachers who found innovations an additional burden to their work, teachers with positive attitudes towards innovation were more open to incorporating digital tools and recognise their potential to enrich the teaching and learning processes (Huang et al., 2019; Ashely-Welbeck & Vlachopoulos, 2020; Souheyla, 2022). These teachers viewed digital tools integration to keep up with the present educational practices and create an ideal learning environment that aligns with the current generation's familiarity and comfort with technology (Ashely-Welbeck & Vlachopoulos, 2020; Souheyla, 2022; Bensalem, 2019).

Dhillon and Murray (2021) claimed that teachers' perceptions of the benefits and challenges associated with using digital tools shape their overall perception. Chatbots, for example, were perceived as helpful tools for providing feedback and fostering social presence in the classroom (Chuah & Kabilan, 2021), hence shaped positive perception among teachers regarding its use in the class. Likewise, Salmee & Abd Majid (2022) pointed out that perceived usefulness and attitude of the English teachers on augmented reality (AR) directly affected their perspectives on the use of AR in the classroom. The benefits perceived comprised improved student engagement, motivation, and greater learner autonomy. On the contrary, challenges such as lack of time for teachers to develop digital literacy and technological difficulties could hinder their perception (Dhillon & Murray, 2021; Afrilyasanti et al., 2022; Meirovitz et al., 2022). Besides the aforementioned factors, other factors including gender, teaching experience and time availability (Al-Mubireek, 2020; Zainal & Zainuddin, 2021) had also been proven to influence teachers' perceptions of digital tools. Zainal & Zainuddin (2021) suggested that the affordances of digital tools and the availability of support structures were among the factors that contribute to teachers' perceptions.

To pull all threads together, computer readiness, beliefs about technology, training and support, prior experience, attitudes towards innovation and perceived benefits and challenges collectively shape teachers' overall perception on the use of digital tools in their lesson. To promote positive perceptions and maximise the benefits of digital tools in English language teaching, it is deemed

crucial to enhance teachers' awareness and provide effective training and support to address the challenges faced by English teachers which are associated with the use of digital tools.

RQ2: The challenges of using digital tools in ESL classrooms, as perceived by teachers

Understanding the challenges and barriers to the use of digital tools in English classrooms is crucial for devising effective strategies and solutions. Based on the articles reviewed, it was identified that the integration of digital tools in English language teaching for English teachers could be hindered by a myriad of challenges.

One significant challenge faced by the English teachers is the lack of training and knowledge on the effective usage of digital tools (Abugohar et al., 2019; Djiwandono, 2019). Similarly, Chuah and Kabilan (2021) highlighted the need for additional training on effectively using specific digital tools like chatbots. ESL teachers might lack the necessary skills and expertise to utilise these digital tools optimally, which impeded their integration efforts (Djiwandono, 2019; Al-Mubireek, 2020; Önalan & Kurt, 2020). Without proper training and knowledge, teachers might struggle to design appropriate activities, provide guidance and fully exploit the potential of digital tools in language instruction (Chuah & Kabilan, 2021; Nguyen, 2022).

Moreover, technical issues also posed a considerable challenge to ESL teachers aiming to integrate digital tools in their classrooms (Zhang & Yu, 2022). Canals and Al-Rawashdeh (2019) as well as Nguyen (2022) highlighted those issues such as poor internet connectivity, inadequate hardware and software access and unstable internet connections had discouraged teachers from using digital tools in their lessons. Al-Mubireek (2020) claimed that the types of devices owned by teachers, lack of technical support and difficulties in monitoring students' device usage further contributed to the challenges. Such technical barriers had not only disrupted the flow of lessons but also obstructed the delivery of supposedly engaging lessons, hampering the overall learning experience (Ashely-Welbeck & Vlachopoulos, 2020; Nguyen, 2022; Zhang & Yu, 2022).

The lack of institutional support and policies was another significant challenge identified (Abugohar et al., 2019; Al-Mubireek, 2020; Ashely-Welbeck & Vlachopoulos, 2020; Vien et al., 2019). The absence of clear guidelines and support systems within educational institutions may discourage teachers from exploring and adopting digital tools in their English language teaching. Önalan and Kurt (2020) argued that teachers required technology, administrative and technical support as well as continuous training tailored to their identified needs, as substantiated by Garib (2022) and Meirovitz et al. (2022). Without the necessary institutional backing, English teachers might encounter difficulties in implementing and sustaining the integration of digital tools. Encouraging collaboration and communication among teachers to share experiences and best practices in using digital tools for English teaching is also crucial for fostering

professional development. Besides, the provision of appropriate amounts of support by the institutions and policy makers would help empower teachers and promote their professional growth, especially in under-resourced contexts to contribute to more inclusive and effective English language education.

Time constraints is another challenge that Djiwandono (2019) and Dhillon and Murray (2022) emphasised that resulted in the limited use of digital tools among the teachers. The demanding schedules left teachers with limited time to develop digital literacy, explore new teaching methodologies and adapt to technological advancements. As a result, teachers might be hesitant to invest time and effort into integrating digital tools, opting for more familiar and time-efficient teaching approaches. The lack of dedicated time for professional development and effective technology use exacerbated the challenges faced by English teachers.

Teachers' familiarity with technology is crucial for successful integration of digital tools in the English classroom, as pointed out by Ashely-Welbeck and Vlachopoulos (2020). Challenges such as technical issues, student-related problems, and the need for improvements in digital tools, for instance, Augmented Reality (AR) applications, could negatively affect teachers' confidence in utilising digital tools effectively (Ashely-Welbeck & Vlachopoulos, 2020; An et al., 2023). Meanwhile, Garib (2022) highlighted students' familiarity with traditional teaching approaches as a challenge in implementing technological-assisted project-based learning, indicating students' low digital literacy proficiency as a hurdle for teachers in their effort to use digital tools in class. Furthermore, Souheyla (2022) mentioned difficulties in maintaining student engagement and motivation in online classes and limited opportunities for interaction and collaboration, coinciding with Kim Anh's (2022) view on executing online teaching. It is reckoned that these challenges could hinder the integration of digital tools by reducing students' participation and hindering the effectiveness of instructional strategies.

On top of that, Meirovitz et al. (2022) emphasised the gap between knowledge and usage of digital tools as a challenge and highlighted the need for teacher education programmes to improve awareness of pedagogical-technological methods. This goes in parallel with Kim Anh (2022) who identified insufficient pedagogical and digital literacy knowledge and skills as challenges. It was suggested that ESL teachers ought to develop digital competence alongside their pedagogical skills to effectively integrate digital tools into their teaching practices. Without the necessary skills and understanding of aligning technology with language learning objectives, teachers may struggle to design and implement meaningful activities that leverage the potential of digital tools.

Challenges such as limited access to equipment and support, lack of guidelines from the Ministry of Education, limited collaboration and guidance and lack of resources were also identified (Foltyn & Polok, 2022; Nguyen, 2022). The scarcity of appropriate digital tools, limited access to relevant materials and insufficient technical support poses significant barriers to English teachers' digital

tools' integration efforts (Foltyn & Polok, 2022; Nguyen, 2022; Kim Anh, 2022). Additionally, the lack of clear guidelines and support structures may hinder teachers' ability to select, evaluate and implement suitable digital tools, further impeding their integration efforts.

Also, Kim Anh (2022) and Keshtiarast et al. (2022) highlighted challenges related to teaching conditions, such as disrupted internet, noisy environments, and interference from parents during online lessons, which was corroborated by Souheyla (2022). These external factors were perceived to be challenges that disrupt the integration of digital tools, leading to communication difficulties, reduced student engagement, as well as compromised learning experiences during online learning.

The findings revealed that despite the generally positive perceptions on the integration of digital tools in their English language teaching, English teachers faced numerous challenges when integrating digital tools into their English language teaching practices. These challenges include a lack of training and knowledge, technical issues and limited access, institutional support and policies, time constraints and preparation, student readiness and engagement, digital competence and pedagogical skills, resource and guideline limitations, and external interference. Addressing these challenges requires collaborative efforts between teachers, educational institutions, policymakers and various stakeholders to provide adequate training, support, resources and guidelines. By overcoming these obstacles, it is believed that teachers can effectively integrate digital tools in their lessons to create engaging and dynamic learning experiences for their students.

5. Conclusion

The present systematic literature review reviewed articles on the use of digital tools in the teaching and learning of English language. In general, English teachers perceived the use of digital tools in the classroom positively. Beliefs about technology, perceived benefits, individual attitudes towards innovation as well as the training and support given were the identified factors that would influence ESL teachers' perceptions towards digital tools and its use for teaching and learning. The study also helped the researchers to gain insights on numerous challenges that has impeded ES: teachers' endeavour to use digital tools in language teaching practices, for instance, insufficient training and digital knowledge as well as limited resources.

Based on the review, it is deemed crucial to foster teachers' digital awareness and provide effective training and support to encourage the utilisation of digital tools in the English language classroom. The challenges associated with technology integration should be addressed since only when the perceived stumbling blocks are reduced, positive perceptions towards the use of digital tools in English lessons among the teachers will form. This would subsequently help to optimise the functionality of digital tools in English language teaching.

Furthermore, this review provided valuable insights to the design and devel-

opment of appropriate, effective teacher training programmes to help the English language teachers adapt to the current teaching trend and be exposed to new educational technology. Additionally, differentiated training curricula which address diverse specific needs of English language teachers could be developed, ensuring that teachers are equipped with the necessary digital skills and knowledge. In relation to that, research to assess the effectiveness of different training programmes for English teachers in using digital tools is also deemed feasible. Additionally, future research could investigate the role of the workplace in supporting digital tools use to help create supportive environments for English language teachers.

In addition, one important area which future research could focus on is the non-technology related factors which may influence technology acceptance among ESL teachers, e.g., cultural factors and regional variations. By scrutinising such factors, barriers or enablers to technology integration could be better identified and comprehended, hence, allowing more precise interventions to be carried out to enhance teachers' acceptance and engagement with technology.

As technology plays a transformative role in language learning outcomes, the effectiveness of different digital tools in honing specific language skills or content is deemed to be an area worth exploring, alongside comparative studies on perceptions towards integrating digital tools among different groups of students and teachers. Longitudinal studies can also be conducted to investigate the long-term impacts of integrating digital tools in English lessons on students' language learning outcomes. The findings may guide pedagogical practices and contribute to more informed policy decisions.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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