Primary School English Language Teaching with AI-Driven Tools: A Deep Dive into Teachers' Practices, Attitudes and Challenges

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ABSTRACT

The incorporation of AI-driven tools in ELT has transformed educational practices by offering personalised learning opportunities, yet their application in primary schools remains underexplored, especially in Malaysia. This study aims to examine primary ESL teachers' practices, attitudes and challenges related to the use of AIdriven tools in their teaching and learning. Despite extensive research on AI tools in secondary school, little attention has been given to their use at the primary school level, presenting a significant gap. Using a quantitative survey methodology, data were collected from 100 primary ESL teachers in Selangor, Malaysia, through a structured questionnaire. The questionnaire explored teachers' demographic information, the types and frequency of AI tools used, their attitudes toward these tools and the challenges they face in integrating them into ELT practices. The findings indicate that content creation tools, such as ChatGPT and Canva, were the most widely used, with teachers generally holding positive attitudes towards AI's effectiveness in improving student pronunciation, vocabulary and engagement. However, challenges like limited resources, lack of training and concerns about data privacy and classroom management were also highlighted. The study contributes valuable insights into the current state of AI integration in primary ELT classrooms, offering recommendations for addressing these challenges and enhancing AI tool adoption.

Keywords: Artificial Intelligence, English Language Teaching (ELT), Practices, Attitudes, Challenges

INTRODUCTION

Artificial Intelligence (AI) has significantly transformed the landscape of education, offering new opportunities for personalised learning. AI-driven tools, such as language learning apps, speech recognition software and grammar checkers are becoming integral in modern classrooms. These tools provide real-time feedback, promote self-paced learning and meet the individual needs of students, particularly in the context of English Language Teaching (ELT). They hold promise in helping learners enhance their proficiency in various aspects of language, including vocabulary, pronunciation and writing. In Malaysia, the Ministry of Education has prioritised the improvement of English language proficiency, acknowledging its importance for academic success and future career opportunities. While substantial efforts have been made to enhance English teaching through various initiatives, challenges remain, particularly in the successful implementation of educational technologies at the primary school level. Although AI-driven tools have been widely adopted in secondary and higher education, their application in primary school ELT remains insufficiently explored. These tools have the potential to address key challenges such as unequal access to resources, teacher training deficits and disparities in educational quality across regions.

While research on AI in secondary education has flourished (Chung & Jeong, 2024; Guan et al., 2025), the application of AI-driven tools in primary school classrooms, particularly in the context of ELT, has received limited attention. Primary school teachers' experiences, practices and perceptions on the integration of AI tools are crucial factors in determining the usefulness of these tools in enhancing language learning. The gap in research on how primary school teachers in Malaysia incorporate AI tools into their ELT practices presents a

need for further exploration of their effectiveness and challenges in primary education. This study aims to address this gap by investigating the following areas: the AI tools that primary school teachers are currently using in their ELT classrooms, the teachers' attitudes towards the how these tools can enhance language learning and the challenges they face when AI-driven tools are applied in their teaching. By exploring these elements, this study seeks to offer insights into how AI-driven tools can be effectively integrated into primary school classrooms, contributing to improved language learning outcomes.

This study seeks to accomplish the following objectives:

1. To explore the current practices of primary school teachers in using AI tools for English Language Teaching.
2. To examine the attitudes of primary school teachers towards the integration of AI tools in ELT.
3. To identify the challenges primary school teachers face when incorporating AI-driven tools into their ELT practices.

LITERATURE REVIEW

AI Integration in ELT

AI integration in English Language Teaching (ELT) has gained traction in secondary and higher education, with various tools enhancing student engagement and language development. Tools like Duolingo enable students to practice vocabulary and grammar independently, while ELSA Speak offers real-time pronunciation feedback, crucial for language acquisition (Kovalenko & Baranivska, 2024). Similarly, writing assistants like Grammarly and ProWritingAid support grammar, style and sentence structure improvement, fostering self-regulated learning (Jomaa et al., 2025). These AI tools facilitate personalised learning, enhancing efficiency, engagement and empowerment (Assali, 2025; Guan et al., 2025). However, despite the promise of AI tools in secondary education, primary school ELT remains underexplored. Kalra (2024) stresses the importance of developmentally appropriate AI tools for younger learners and the need for teacher training to ensure effective integration. Therefore, there is a need to explore how these tools can be adapted for primary school contexts and effectively support foundational language skills.

Teachers' Practices with AI Tools

AI tools are increasingly integrated into secondary and higher education for improving language learning, with many teachers recognising their potential to personalise learning and provide immediate feedback. Language learning apps like Duolingo offer independent practice for vocabulary and grammar (Crompton et al., 2024), and ELSA Speak helps with real-time pronunciation feedback (Kovalenko & Baranivska, 2024). Writing assistants like Grammarly assist in refining grammar and style, encouraging self-regulated learning (Jomaa et al., 2025). Despite the growing adoption of AI tools, research on primary school teachers' practices remains scarce. While secondary education benefits from these tools, primary school teachers' approaches to using AI tools for language teaching require more investigation. The integration of AI tools in primary school contexts must be adapted for younger learners, and teachers need adequate training to implement these tools effectively, as highlighted by Sebayang et al. (2025). Thus, there is a clear gap in how AI-driven tools can be used in primary school ELT settings.

Teachers' Attitudes Towards AI in ELT

Teachers' attitudes are pivotal in the adoption of AI-driven tools in the classroom, with many secondary and higher education teachers acknowledging AI's role in personalising learning and boosting engagement (Chung & Jeong, 2024). However, concerns about AI's ability to foster critical thinking and the reduction of human interaction have been raised (Deffenie et al., 2024). In primary education, limited research has explored teachers' attitudes towards AI tools. Some studies suggest that primary school teachers are enthusiastic about AI's potential to support language learning but express concerns about students' over-reliance on technology (Suharno et al., 2025). Assali (2025) emphasises the importance of teachers' perceptions in determining the usefulness of these

tools in improving language acquisition, particularly vocabulary. Additional research is required to gain a deeper understanding of primary teachers' attitudes and how these perceptions influence the incorporation of AI-driven tools in primary ELT.

Challenges in AI Integration

AI tools integration into primary school classrooms faces several challenges. A major obstacle is the lack of teacher training, with many educators feeling unprepared to use AI tools effectively due to insufficient professional development (Sebayang et al., 2025). Technical issues such as poor internet connectivity and outdated devices further hinder AI tool adoption, particularly in resource-constrained schools (Kovalenko & Baranivska, 2024). Ethical concerns, including data privacy and over-reliance on AI, add to the complexity of AI integration. Kalra (2024) highlights the risk that AI tools may hinder students' critical thinking and independence, particularly in primary education. Additionally, AI tools may not always align with the local cultural and linguistic contexts, posing another challenge to their effective use in diverse classrooms (Üretmen Karaoğlu & Doğan, 2025). Despite the identified challenges, there remains a significant gap in research on how to effectively address the lack of teacher training, technical difficulties and ethical concerns surrounding the incorporation of AI-driven tools in primary school classrooms.

Technology Acceptance Model (TAM)

This study draws on the Technology Acceptance Model (TAM), developed by Davis (1989), which identifies the key factors influencing the adoption of technology. The model focuses on two key constructs: Perceived Usefulness, which suggests that using AI tools can enhance students' learning outcomes and Perceived Ease of Use, which indicates that AI tools are easy to use. In the context of primary ESL teachers in Malaysia, Perceived Usefulness would determine whether teachers believe AI tools can improve students' language proficiency, while Perceived Ease of Use addresses how user-friendly these tools are. The TAM is suitable for this study because it helps explain how teachers' perceptions of AI tools' effectiveness and usability impact their adoption in ELT classrooms. This framework also helps identify barriers, such as technical challenges or lack of training, that may hinder successful AI integration. Thus, the TAM provides a valuable lens to explore how primary ESL teachers perceive and adopt AI tools for language teaching, influencing their classroom practices.

METHODOLOGY

Research Design

This study utilised a quantitative research design, specifically using a descriptive survey method to explore primary ESL teachers' practices, attitudes and challenges in integrating AI-driven tools in their ELT classrooms. The choice of this research design enabled the collection of systematic and quantifiable data to explore the types of AI-driven tools used, the teachers' perspectives of their integration in ELT and the challenges they encountered in incorporating these tools into their ELT practices (Creswell, 2015). This provides a snapshot of how AI tools are being utilised in primary ELT classrooms. The primary data collection instrument was a structured questionnaire, featuring both closed and open-ended questions. The questionnaire focused on teachers' demographic information, frequency and types of AI tool usage, their attitudes towards the AI tool integration and the challenges faced when using these tools in their teaching. Using this approach, the study sought to offer a thorough overview of the current landscape of AI use in Malaysian primary ELT classrooms.

Population and Sampling

This study focused on primary ESL teachers in Selangor, Malaysia, specifically those responsible for teaching English as a Second Language to primary school students. The primary objective was to gain insights into their experiences and perceptions of AI-driven tools in English Language Teaching (ELT). The sample consisted of 100 primary ESL teachers, selected through purposive sampling. This approach was chosen to ensure that the participants had direct experience with and knowledge of using AI tools in their classrooms. By selecting teachers with specific expertise and familiar with these tools, the study was able to gather valuable information regarding their usage, usefulness and the challenges they face in integrating AI into ELT classrooms (Cohen, 2018).

Data Collection Method

For this study, data were collected through a structured online questionnaire distributed the selected primary ESL teachers using Google Forms. The questionnaire aimed to capture teachers' specific practices, attitudes and challenges related to AI-driven tools in ELT. The decision to use an online format was driven by its efficiency, ease of distribution and convenience, allowing for access to a broad sample of teachers across different primary schools in Selangor. The questionnaire was distributed through an official Telegram group that included ESL teachers from schools in Selangor, ensuring that the survey reached a broad audience of teachers in a timely and accessible manner.

Instrument

The study used a structured questionnaire as the main tool for data collection. The questionnaire was designed to measure primary ESL teachers' practices, attitudes and challenges regarding the use of AI tools for ELT. It comprised five sections: Section 1 gathered demographic information about the participants, such as gender, age, years of teaching experience, school location and teachers' confidence in using AI tools. Section 2 focused on the types and frequency of AI tools used by teachers, such as language learning apps, speech recognition tools, grammar checkers and content creation tools. Section 3 assessed teachers' attitudes towards the use of AI tools in improving students' language proficiency, engagement and learning outcomes. Section 4 explored the challenges teachers face when integrating AI tools, including issues related to training, technical difficulties and resource limitations. Finally, Section 5 included open-ended questions to gather qualitative insights into teachers' experiences with AI tools, the benefits they observed and the challenges they encountered in their teaching practices.

Reliability and Validity

The questionnaire was first subjected to expert validation to ensure the validity and relevance of the instrument. A panel of three experts in the field of ESL education, each with extensive experience in both teaching and research, reviewed the questionnaire. Their feedback helped verify the content of the instrument, ensuring that the questions were relevant, clear, and aligned with the study's objectives. Based on their feedback, adjustments were made to improve the clarity of the language and the relevance of some items. Following expert validation, a pilot study was conducted, involved 20 samples of primary ESL teachers selected from different schools within Selangor. This pilot aimed to assess the clarity, reliability and overall applicability of the instrument in real classroom settings. The reliability of the items was measured using Cronbach's alpha to determine the internal consistency of the responses. The Cronbach's alpha results confirmed that the instrument was reliable, with acceptable levels of consistency for Teachers' Practices with AI Tools, Attitudes Towards AI Tools and Challenges in Integrating AI Tools in the Classroom sections, as shown in Table 1 and 2. This process ensured that the instrument was both valid and reliable for the full-scale survey. Based on the findings from the pilot study, minor adjustments were made to improve the questionnaire's effectiveness. The final version of the questionnaire was then distributed to the full sample of ESL teachers across Selangor state.

Table 1 Instrument Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardised Items	N of Items
.960	.966	24

Table 2 Construct Reliability Statistics

Construct	Cronbach's Alpha	Cronbach's Alpha Based on Standardised Items	N of Items
Teachers' practices with AI tools	.861	.898	5
Teachers' attitudes towards AI tools	.976	.985	10
Challenges in integrating AI tools	.917	.920	9

Data Analysis

The quantitative data were analysed using SPSS (Statistical Package for Social Sciences), Version 30.0. Descriptive statistics, such as frequencies, means and standard deviations, were used to summarise the responses and identify trends in teachers' practices, attitudes and challenges regarding AI tool usage in primary ESL classrooms. For the closed-ended questions, responses on the 5-point Likert scale were converted into numerical values, where "Strongly Agree" was assigned the highest value (5) and "Strongly Disagree" the lowest value (1). This allowed for a clear, quantitative analysis of AI tool usage, teachers' attitudes and challenges related to AI integration.

Additionally, the qualitative data from the open-ended questions were analysed using thematic analysis to identify key themes regarding the benefits and challenges of AI integration in ELT. The findings from both the descriptive statistics and thematic analysis were used to answer the research questions and provide a comprehensive understanding of AI tool use in primary ESL classrooms.

Ethical Considerations

Throughout the study, ethical guidelines were carefully followed to ensure the integrity of the research and protect the participants. Informed consent was obtained from all participants, who were provided with clear information about the study's purpose, their right to confidentiality and the voluntary nature of their participation, as outlined in the survey questionnaire before they took part. This approach was intended to ensure transparency and respect participants' autonomy in making an informed decision about their involvement (Crewell, 2015). Teachers were assured that their responses would remain anonymous and used only for the study, safeguarding their privacy and avoiding any potential biases. Participants were also told they could withdraw from the study at any time without any consequences, ensuring they could participate freely without pressure. All collected data was securely stored and only accessible to the researcher, maintaining both confidentiality and the integrity of the information. The data will be used solely for this research and will not be shared with any outside parties, in line with ethical standards and to protect participants' rights. These measures were put in place to foster trust, encourage honest responses and ensure the study met the highest ethical standards.

RESULTS AND FINDINGS

Demographic Information

Table 3 Demographic Information

Variable	Category	Frequency	Percentage
Gender	Male	34	34
	Female	66	66
Age	21-30 years old	40	40
	31-40 years old	33	33
	41-50 years old	16	16
	51 years old and above	11	11
Years of Teaching Experience	Less than 5 years	40	40
	5-10 years	24	24
	11-15 years	13	13
	More than 15 years	23	23
School location	Urban	38	38
	Sub-urban	54	54
	Rural	8	8
Formal training in AI tools	Yes	81	81
	No	19	19

Confidence in Using AI Tools	Not confident at all	4	4
	Slightly confident	31	31
	Confident	39	39
	Very confident	22	22
	Extremely confident	4	4

Table 3 presents the demographic information of the study participants. The questionnaire results show that the majority of respondents were female (66%) and 34% were male teachers. In terms of age, 40% teachers were between 21 and 30 years old, followed by those aged between 31 and 40 years (33%). A smaller percentage of respondents were between 41-50 years old (16%) and only 11% were aged 51 years and above. Regarding years of teaching experience, 40% of the teachers had less than five years of experience, 24% had between 5-10 years, 13% had 11-15 years and 23% had more than 15 years of teaching experience. The majority of teachers were from sub-urban schools (54%), with 38% from urban schools and only 8% from rural schools. When it comes to formal training in AI tools, 81% of teachers reported having received training, while 19% had not. In terms of confidence in using AI tools, a significant portion of teachers (39%) were confident, 22% were very confident and 31% were slightly confident. However, 4% of teachers expressed being not confident at all, indicating a potential area for further professional development. These demographic characteristics highlight a relatively young, predominantly female teacher population with a high level of confidence in using AI tools, although there is still a gap in training opportunities for some teachers. This information is valuable as it provides insight into the backgrounds of the teachers involved in this study and the factors that might influence their adoption and use of AI tools in their classrooms.

AI-Driven Tools Used by Primary School Teachers in ELT

Table 4 Teachers' Practices with AI Tools

No	Variable	Mean	SD	Rank
1	Language learning tools	2.47	1.04	5
2	Speech recognition tools	3.49	0.92	4
3	Grammar checkers	3.96	0.83	2
4	Interactive learning and assessment tools	3.85	0.92	3
5	Content creation tools	4.16	0.91	1

Table 4 presents the findings on the frequency and types of AI tools used by primary school teachers in ELT. The results indicate that Content Creation Tools (M = 4.16, SD = 0.91) are the most commonly used by teachers, followed by Grammar Checkers (M = 3.96, SD = 0.83) and Interactive Learning and Assessment Tools (M = 3.85, SD = 0.92). Content creation tools, such as ChatGPT, Canva and Powtoon, are favoured for developing engaging and interactive lesson materials. These tools enable teachers to design dynamic content that enhances student engagement and learning experiences. Grammar Checkers like Grammarly and ProWritingAid were the second most commonly used AI tools, reflecting their role in improving students' writing skills. Similarly, Interactive Learning and Assessment Tools such as Kahoot! and Quizlet are also widely used to facilitate gamified learning and interactive assessments, which help reinforce the material and increase student participation.

On the other hand, Speech Recognition Tools (M = 3.49, SD = 0.92) and Language Learning Apps (M = 2.47, SD = 1.04) were reported as being used less frequently. Despite this, tools like SpeechTexter and ELSA Speak are still employed to assist with pronunciation practice, while language learning apps, such as Duolingo, are occasionally used to help students build vocabulary. These results suggest that while AI tools are being used effectively in various aspects of ELT, there is a notable preference for content creation and grammar-checking tools, with less emphasis on pronunciation and vocabulary development tools.

Table 5 Teachers' Practices with AI Tools

No	Variable	Frequency	Percentage
1	Content Creation Tools	51	48.6
2	Grammar Checkers	20	19.0
3	Interactive Learning and Assessment Tools	16	15.2
4	Speech Recognition Tools	10	9.5
5	Language Learning Apps	8	7.6

Table 5 displays the teachers' practices with AI tools. The open-ended responses support the questionnaire findings, with Content Creation Tools being the most frequently mentioned (51 responses). Teachers noted the value of tools like ChatGPT and Canva for lesson planning and creating interactive classroom activities. As one teacher stated, *"ChatGPT helps me create classroom activities that suit my students"* (T15), while another mentioned, *"Canva is used to create interactive tasks*" (T20). Grammar Checkers followed with 20 mentions, highlighting their role in improving students' writing. One teacher shared, *"Grammarly is the most useful tool because it assists in grammar correction"* (T71). Interactive Learning and Assessment Tools like Kahoot! and Quizlet were mentioned 16 times, with a teacher noting, *"AI tools like Kahoot! and Quizlet allow me to create interactive quizzes and activities"* (T53). Although Speech Recognition Tools and Language Learning Apps were less frequently mentioned, they were still valued for specific purposes like pronunciation and vocabulary improvement. One teacher noted, *"AI-based pronunciation tools like ELSA Speak are great for language learners to practice speaking"* (T56).

Primary School Teachers' Attitudes towards the AI-Driven Tools in ELT

Table 6 Teachers' Attitudes Towards AI Tools

No	Variable	Mean	SD	Rank
1	AI tools improve students' English language proficiency.	3.96	0.45	9
2	AI tools provide personalised learning experiences that benefit students.	4.01	0.49	5
3	AI tools are effective in improving students' vocabulary.	4.15	0.54	4
4	AI tools are effective in improving students' pronunciation.	4.28	0.65	1
5	AI tools enhance students' writing skills.	3.96	0.83	10
6	AI tools increase students' engagement in language learning.	4.27	0.61	2
7	AI tools are easy to incorporate into my teaching practice.	3.97	0.72	8
8	I feel confident in using AI tools to teach English in my classroom.	4.01	0.69	6
9	AI tools are useful for supporting differentiated learning in my classroom.	3.98	0.65	7
10	AI tools enhance students' ability to practise English outside the classroom.	4.19	0.63	3

Table 6 presents the teachers' attitudes towards AI tools. The questionnaire results reveal that primary school teachers generally hold a positive attitude towards AI adoption in ELT. The highest-rated aspect was AI tools' ability to improve students' pronunciation (M = 4.28, SD = 0.65), followed closely by their impact on student engagement (M = 4.27, SD = 0.61). Teachers also viewed AI tools as effective for enhancing students' vocabulary (M = 4.15, SD = 0.54) and enabling students to practise English outside the classroom (M = 4.19, SD = 0.63). In contrast, AI tools were considered less effective in improving students' writing skills (M = 3.96, SD = 0.83) and overall English language proficiency (M = 3.96, SD = 0.45). This suggests that while teachers recognise the value of AI in specific areas like pronunciation and vocabulary, they feel less confident in its impact on writing and overall language proficiency.

Additionally, teachers reported being confident in using AI tools (M = 4.01, SD = 0.69) and found AI tools useful for personalised learning (M = 4.01, SD = 0.49), indicating a high level of confidence in their ability to integrate these tools into their teaching practices. However, challenges around classroom integration (M = 3.97, SD =

0.72) and differentiated learning (M = 3.98, SD = 0.65) were also noted, pointing to the need for further training and support to fully leverage AI in diverse classroom contexts.

Table 7 Teachers' Attitudes Towards AI Tools

No	Theme	Frequency	Percentage
1	Student engagement, motivation and confidence	30	26.5
2	Improvement in language skills	21	18.6
3	Personalised and adaptive learning	18	15.9
4	Interactive and fun learning environment	17	15.0
5	Teacher efficiency and time-saving	14	12.4
6	Real-time feedback and self-correction	13	11.5

Table 7 presents the themes of teachers' attitudes towards AI tools. From the open-ended responses, student engagement, motivation and confidence the most commonly mentioned, making up 26.5%. Many teachers observed that AI tools significantly boosted student participation and enthusiasm. One teacher noted, *"Students become more engaged and motivated"* (T2). Moreover, teachers reported improvements in student confidence, with one stating, *"Students show better engagement, improved confidence and faster progress in writing, vocabulary and speaking"* (T6). AI tools were also recognised for improving language skills (18.6%), particularly in areas such as writing, vocabulary and speaking. One teacher mentioned, *"It has given students immediate feedback, allowing them to revise their work and improve their language skills quickly"* (T39). These tools were also praised for their ability to provide personalised and adaptive learning (15.9%), catering to individual student needs. As one teacher highlighted, *"It has increased student motivation and engagement, especially for those who enjoy gaming"* (T76).

Another significant theme was creating an interactive and fun learning environment (15.0%), with teachers noting that AI tools made learning more engaging for students, especially in reading. One teacher shared, *"Students' reading comprehension has improved, and they are more eager to read"* (T49). Furthermore, AI tools were recognised for improving teacher efficiency and time-saving (12.4%) by reducing grading time. A teacher explained, *"It has reduced the time I spend grading and allows me to focus more on individual student needs"* (T29). Lastly, AI tools were appreciated for providing real-time feedback and self-correction (11.5%) as *"It has helped students self-correct their work and understand grammar rules better"* (T31).

Challenges Faced in Integrating AI-Driven Tools in ELT Practices

Table 8 Challenges in Integrating AI Tools

No	Variable	Mean	SD	Rank
1	I lack training to effectively use AI tools in my teaching.	2.85	0.91	8
2	Technical difficulties hinder the use of AI tools in my classroom.	2.74	1.43	9
3	Limited resources prevent me from integrating AI tools in my teaching.	3.72	0.96	1
4	I am concerned that AI tools might replace traditional teaching methods and reduce human interaction in the classroom.	3.24	1.04	5
5	I'm concerned about the data privacy issues related to using AI tools in the classroom.	3.69	0.93	2
6	The cultural appropriateness of AI tools is a concern when using them with my students.	3.36	1.08	4
7	There is a lack of professional development opportunities to learn how to integrate AI tools effectively into teaching.	3.21	1.09	6
8	The curriculum does not support or align with the use of AI tools in the classroom.	3.05	1.01	7
9	Classroom management becomes more challenging when using AI tools, as it may distract students from focusing on other tasks.	3.67	0.96	3

Table 8 outlines the themes of challenges faced by teachers in integrating AI tools into their teaching practices. The findings from the questionnaire highlight several challenges faced by primary school teachers in integrating AI tools into their teaching practices. The most significant challenge identified was limited resources (M = 3.72, SD = 0.96), with teachers noting insufficient access to devices and AI software as major barriers to effective integration. Data privacy concerns (M = 3.69, SD = 0.93) followed closely, indicating teacher apprehension regarding the security of student data when using AI tools. Classroom management issues (M = 3.67, SD = 0.96), including the risk of AI tools distracting students, were also noted as a challenge. Additionally, concerns about cultural appropriateness (M = 3.36, SD = 1.08) and the replacement of traditional teaching methods (M = 3.24, SD = 1.04) were identified as major obstacles to the practical use of AI-driven tools in ELT.

Table 9 Challenges in Integrating AI Tools

No	Theme	Frequency	Percentage
1	Technical challenges and resource limitations	25	24.3
2	Classroom management and engagement issues	21	20.4
3	Over-reliance on AI and misuse	16	15.5
4	Feedback issues and AI limitations	16	15.5
5	Difficulty with AI tool navigation and content complexity	14	13.6
6	Student anxiety and confidence issues	11	10.7

Table 9 shows the themes of challenges faced by primary school teachers in integrating AI tools into their teaching practices. Technical challenges and resource limitations were the most frequently mentioned (25 responses, 24.3%). Teachers expressed frustrations over issues such as software bugs and unreliable internet connectivity that disrupted the learning experience. One teacher noted, "*Technical difficulties, such as software bugs, sometimes disrupt the learning experience"* (T48), highlighting the technological barriers hindering effective AI tool use. Classroom management and engagement issues followed closely (21 responses, 20.4%). Teachers reported concerns that AI tools might distract students, making it harder to maintain control over the classroom. A teacher commented, *"Students sometimes over-rely on the tool and don't develop their grammar skills enough"* (T54), pointing to the potential for AI tools to limit students' independent skills development if not properly integrated.

The over-dependence on AI and its improper use were also identified as significant challenges, with 16 responses representing 15.5%. Teachers mentioned that some students became too dependent on AI tools for error correction, which could hinder their overall learning progress. As one teacher stated, *"Some students become too dependent on these tools for error correction*" (T71), indicating that an over-reliance on technology could impede students from developing critical language skills independently. Difficulty with AI tool navigation and content complexity (14 responses, 13.6%) was another concern. Teachers reported that some students had trouble navigating the platforms or accessing the learning materials. One teacher shared, *"Some students have difficulty navigating the platform and accessing the materials" (*T86), suggesting that the tools may not be intuitive enough for younger students or those unfamiliar with the technology. Student anxiety and confidence issues were the least frequently mentioned challenge (11 responses, 10.7%). Teachers noted that some students felt self-conscious when practicing speaking, particularly in AI-driven environments. As one teacher observed, *"Some students feel self-conscious when practicing speaking and fear judgment*" (T97), emphasising the emotional challenges faced by learners in using AI tools for language practice.

DISCUSSION

AI-Driven Tools Used by Primary School Teachers in ELT

The results of this study revealed that Content Creation Tools, such as ChatGPT and Canva, are the most widely used AI tools by primary school teachers in their English Language Teaching (ELT) classrooms. These tools were particularly valued for their ability to produce engaging and interactive lesson materials that address the varied needs of students. This finding is consistent with Al-khresheh (2024), who highlighted the effectiveness

of ChatGPT in supporting teachers in generating dynamic and personalized content. Ouahani and Mahraj (2025) also noted that ChatGPT has seen widespread adoption globally, with teachers using it to facilitate content creation and enhance interactive learning. Teachers in this study emphasised that these tools allowed them to design materials that actively engage students and promote participatory learning, which aligns with Assali (2025), who stated that content creation tools significantly contribute to creating interactive classroom activities.

In addition, grammar checkers such as Grammarly and ProWritingAid, along with Interactive Learning and Assessment Tools like Kahoot! and Quizlet support writing development and student engagement, aligning with the findings of Lim & Yunus (2021) and Jomaa et al. (2025), who pointed out that AI tools in the form of writing assistants and gamified platforms enhance students' vocabulary and writing skills. In particular, Ng et al. (2025) emphasised the positive effects of Grammarly on improving students' writing skills in ELT classrooms, which in line with the findings of this study where Grammarly was one of the more frequently used tools. These tools help students improve grammar, punctuation and writing structure, which is crucial for developing writing proficiency. Kovalenko & Baranivska (2024) also identified interactive platforms like Kahoot! as being useful in boosting student participation and motivation, further confirming the widespread adoption of these tools in enhancing student involvement.

However, the less frequent use of speech recognition tools such as ELSA Speak and language learning apps like Duolingo was noted in this study. This result is consistent with Le et al. (2025), who found that AI-based language learning apps are popular in secondary education but are not yet fully embraced in primary classrooms. Tarannum et al. (2025) similarly discussed that while ChatGPT is gaining momentum in various contexts, language learning apps such as Duolingo are still being used to a lesser extent in primary education, possibly due to developmental constraints and the need for more engaging, hands-on learning experiences for younger students. Guan et al. (2025) also noted that while these tools can be very beneficial for improving pronunciation and vocabulary, their adoption in primary education remains limited, possibly due to a preference for tools that offer more interactive content creation and immediate feedback rather than those focusing on language skills development.

Primary School Teachers' Attitudes towards the AI-Driven Tools in ELT

Primary school teachers hold positive attitudes towards the application of AI-driven tools in enhancing various aspects of student learning in ELT. Teachers particularly highlighted the significant role AI tools play in improving students' pronunciation. This result reflects the widespread belief that AI speech recognition tools, such as ELSA Speak, can provide students with immediate feedback on their pronunciation, helping them refine their speaking skills outside the classroom. This finding aligns with Ouahani & Mahraj (2025), who found that AI-driven speech recognition tools are effective in correcting pronunciation, offering personalised learning that caters to individual student needs. Teachers in this study noted that pronunciation tools not only improve the accuracy of students' speech but also increase their confidence in speaking, contributing to their language development.

In addition to pronunciation, teachers expressed that AI tools significantly increase student engagement in language learning. This aligns with the findings of Assali (2025), who noted that AI tools help create an interactive learning environment that engages students and promotes active participation. Teachers in this study reported that AI tools made lessons more dynamic and fun, which led to increased enthusiasm and motivation among students. For example, teachers mentioned using gamified platforms like Kahoot! and Quizlet, which provided opportunities for students to engage in interactive quizzes and learning activities that made language learning enjoyable. Alshumaimeri & Alshememry (2024) and Soh & Yunus (2023) also emphasised that interactive AI platforms enhance student participation and make learning more engaging, which is essential for maintaining motivation in primary school classrooms.

Furthermore, AI tools were viewed as effective in enhancing students' ability to practise English outside the classroom. This finding resonates with Guan et al. (2025), who argued that AI tools facilitate self-directed learning by enabling students to practise language skills independently, particularly outside the classroom. Teachers observed that tools like Duolingo and Grammarly gave students opportunities to practice vocabulary,

pronunciation and writing on their own time, reinforcing lessons learned in class. As Azap (2025) noted, such tools provide instant feedback, which is vital for students to improve their language skills autonomously and at their own pace.

However, despite the general enthusiasm for AI tools, some teachers expressed concerns about their impact on students' writing skills, suggesting that while AI tools like Grammarly are helpful for grammar correction, teachers were less confident in their ability to foster higher-order writing skills. Guan et al. (2025) highlighted similar concerns, noting that although AI tools can assist with mechanical aspects of writing, they may not sufficiently address the deeper cognitive processes required for critical writing. This concern was also voiced by teachers in this study, who felt that AI tools might provide surface-level assistance but fail to encourage creative thinking or independent writing.

Challenges Faced in Integrating AI-Driven Tools in ELT Practices

The results of this study highlighted several significant challenges that primary school teachers faced when using AI tools into their English Language Teaching (ELT) practices, which resonate with findings from various studies in the field. One of the most prominent barriers identified was limited resources, including insufficient access to devices and AI software. This finding is consistent with Kovalenko & Baranivska (2024), who emphasised that schools with limited technological infrastructure face difficulties in utilising AI tools effectively. Teachers in this study expressed frustration over the lack of appropriate devices and unreliable internet connectivity, which hindered their ability to make full use of AI tools in their classrooms. Metwally & Bin-Hady (2025) also pointed out the importance of providing adequate resources and training to overcome these limitations, as resource-poor schools often struggle to adopt educational technology.

Additionally, data privacy issue was another significant concern in the integration of AI tools. Teachers expressed anxiety about the security of student data, with many uncertain about how AI tools handle personal information. This concern aligns with Suharno et al. (2025), who highlighted that data privacy remains a pressing issue for educators, especially when using AI platforms that store student data. Ugli, Kamal and Azamovna (2025) also echoed this concern, stating that data protection and ethical issues related to AI tools are vital areas of focus, particularly in education contexts where students' data may be vulnerable, emphasising the need for secure and transparent AI tools that adhere to data privacy regulations.

The challenge of classroom management was also noted, with teachers mentioning that AI tools sometimes contributed to distractions in the classroom. This concern is consistent with Guan et al. (2025), who observed that AI tools, particularly those that gamify learning, can lead to over-engagement and distract students from their core tasks. Teachers in this study expressed concerns that students might become too focused on the gamebased aspects of AI tools, which could compromise their focus on core language skills. Similarly, Metwally & Bin-Hady (2025) noted that while AI tools can enhance engagement, they might also cause students to disengage from critical thinking tasks and impede independent learning, particularly in younger learners who are still developing their cognitive skills.

Another major concern was the cultural appropriateness of AI tools, where teachers questioned whether the content provided by AI tools was relevant and sensitive to their students' cultural contexts. This finding aligns with Üretmen Karaoğlu & Doğan (2025), who emphasised that AI tools must be culturally adapted to fit the diverse needs of students in different educational contexts. Teachers in this study mentioned that some AI tools may be too generic or designed for different educational systems, leading to a disconnect with their students' learning needs. Al-shumaimeri & Alshememry (2024) also pointed out that AI tools need to be culturally sensitive, considering the local context and ensuring that the material aligns with students' cultural backgrounds to be effective.

Moreover, teachers' lack of training was cited as a major barrier to the integration of AI tools in the classroom. Despite the positive attitudes towards AI tools, many teachers reported feeling underprepared to use these tools effectively in teaching and learning. Metwally & Bin-Hady (2025) highlighted the importance of professional

development programmes aimed at EFL teachers, stressing that continuous training and support are essential for successful AI tool integration. In this study, teachers expressed a desire for more structured professional development to learn how to incorporate AI into their lesson plans and teaching strategies, which reflects the broader concern raised by Alsalem (2024), who argued that AI integration cannot be successful without a solid foundation of teacher preparation.

CONCLUSION

This study investigated the use of AI-driven tools in primary school English Language Teaching (ELT) classrooms in Malaysia. The findings showed that Content Creation Tools like ChatGPT and Canva were the most commonly used for lesson planning and enhancing student engagement. Grammar checkers and interactive learning tools such as Kahoot! and Quizlet also played key roles in improving writing skills and increasing student participation. Teachers were generally positive about how AI tools are used, particularly for pronunciation, engagement and vocabulary development. However, challenges like limited resources, lack of training and concerns over replacing traditional methods were also noted. The study's results highlight the importance of enhancing teacher training to better integrate AI-driven tools into ELT. Policymakers need to address technical challenges such as internet connectivity and ensure that schools have sufficient resources. Therefore, future research should explore the long-term effects of AI on developing students' critical thinking and creativity. The study has some limitations, such as a small sample size of 100 primary ESL teachers from Selangor, which restricts the ability to generalise the findings. To address this, future research could expand the sample by using a national or random sampling approach to enhance the representativeness and generalisability of the results across different regions and teacher populations, thereby providing a more comprehensive understanding of the issues and allowing for broader conclusions. Additionally, the use of self-reported data may introduce potential bias. Future studies could benefit from incorporating classroom observations to further investigate how AI influences student learning, especially in areas like problem-solving and language proficiency. Despite these limitations, the study provides valuable insights and practical recommendations for enhancing the use of AI-driven tools in primary ELT classrooms.

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