

Artificial Intelligence for Language Learning and Assessment: Uses, Challenges, and Opportunities in Secondary Schools

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ABSTRACT

This study aimed to explore the uses, challenges, and opportunities of Artificial Intelligence in language learning and assessment within secondary schools. Language learning at this level is crucial for enhancing communication skills, academic success, and future career prospects. Despite efforts by various schools to boost academic performance and teacher-student communication, issues like insufficient teaching resources, large class sizes, lack of personalized feedback, and subjective assessment methods persist. The rise of AI-powered educational tools introduces new possibilities to support language instruction and evaluation. Consequently, this research was conducted to improve learning experiences and assessment precision in secondary education. It employs a mixed-methods approach, combining qualitative and quantitative research designs, to gain a comprehensive understanding of AI's application and perceptions in this context. Data collection involved structured questionnaires given to teachers and students to assess AI usage frequency, perceived effectiveness, assessment accuracy, and usability. Additionally, interviews explored participants' experiences, implementation challenges, ethical issues, infrastructure constraints, and opportunities related to AI in language learning and evaluation. Results indicate that AI significantly enhances language learning through personalized pathways, real-time feedback, automated grading, and interactive environments. AI tools support vocabulary development, grammar correction, pronunciation practice, and writing skills. Moreover, AI-based assessment systems increase marking efficiency and reduce teachers' workload. However, challenges such as inadequate ICT infrastructure, limited teacher training, data privacy concerns, high implementation costs, and students' overdependence on AI responses are noted. Despite these obstacles, findings suggest that AI holds strong potential to revolutionize language education through adaptive learning and data-driven assessments. The study concludes that AI presents valuable opportunities to improve language learning and assessment in secondary schools. Although issues like infrastructure gaps, ethical considerations, and the need for teacher training remain, the advantages of AI in personalization, efficiency, and evaluation accuracy outweigh these challenges. To realize AI's full potential, strategic implementation, comprehensive training, and supportive policies are essential for transforming secondary school language education.

Keywords: Artificial Intelligence, Language Learning, Language Assessment, Secondary Schools

1. INTRODUCTION

Language is main function of secondary education worldwide, it enable students to develop academic capability, communication skills and understanding cultural differences. Effective language learning and assessment support students in understanding listening, writing, reading and speaking skills though enabling teachers to control progress and feedback. Assessment play a critical role in in measuring students' language competence, informing academic decisions and guiding instructional strategies. As well as more students join secondary schools , the schools also have to handle more subjects, lessons and teaching requirements, need for innovative, efficient and accurate language teaching and assessment approaches becomes more important . In rapid advancing words, technology is at forefront of transformative change (Zhang & Aslam, 2021). Artificial intelligent has arisen as powerful force as said by (Borenstein & Howard, 2021). AI as branch of computer science focusing on constructing intelligent machines that carry out actions

typically associated with human intelligence, and advanced across every field such as , from business to agriculture, economics, medicines and education (Ouyang, 2021). Ai in education has a history spanning more six decades (Chaudhry, 2022).

Culturally, Language learning in secondary schools mostly based on teacher model instruction, written assignment, printed textbooks, and manual grading systems. Although this approach has been used often associated with number of challenges such as large class sizes, limited feedbacks, inefficient practices, delayed assessment results, high teacher workload, reduce students' engagement, difficult tracking process and inefficient learning resources (Guilherme, 2019). Manual assessment techniques may not always provide timely or personalize feedback necessary to improve students' language learning skills (Zhang, 2021). Many secondary schools especially in developing contexts there is problem of limited technological infrastructure in effective language instruction and assessment practices. The rapid advancement of AI is transforming the nature of educational services and assessment systems globally (Guilherme, 2019; Ouyang, 2021).

The rapid advancement of AI technologies has introduced new possibilities in the educational sector, particularly in language learning and assessment. AI powered tools like intelligent tutoring systems, automated essay scoring, speech recognition software and adaptive learning platforms have transformed how student interact with language content (Zhang, 2021). These technologies provide real time feedback, personalized learning pathways, vocabulary enhancement and automated grading (Chaudhry, 2022). AI systems are analyzing large amounts of student's data to identify strength and weakness, therefore support data driven instructional decisions and assessment practices (Ouyang, 2021). Among these innovative solutions are squirrel AI learning, the pioneering Chines AI Company that has made significant in personalized learning. ALEKS (assessment and learning in knowledge spaces) is another important tool that offers tailor made learning experiences. Duolingo leverages Ai for language learning, while automatic grading system improves assessment efficiency (Zhang, 2021).

AI presents significant advantages for improving language education in secondary schools. Personalized learning environments allow students to learn at their own pace while automated system reduce teacher's workload and improve marking consistently (Zhang, 2021; Chaudhry, 2022). Real time feedback enhances student engagement and promote self-directed learning (Ouyang, 2021). Moreover, AI based on analytics can assist teachers and schools' administrators in monitoring student performance tends and identifying areas need for help (Guilherme, 2019). The integration of AI technologies marks turning points in education, promising a future defined by innovative and efficient education practices (Zhang & Aslan, 2021).

Despites its benefits, the integration of AI in language learning and assessment presents several challenges such as inadequate ICT infrastructure, limited teacher training and digital literacy, high implementation and maintenance costs, data privacy and ethical use of student information, and the risk of over dependence on automated systems (Borenstein, 2021; Guilherme, 2019). While AI integration in education brings opportunities and advantages it has also led to several challenges like cheating and plagiarism (Borenstein, 2021). Students frequent copy assignments from online assistants, without their own critical thinking, creating problem for teachers during evaluation (Borenstein & Howard, 2021). The rapid integration of AI into educational system is transforming examining criteria, grading systems, and teaching methods (Ouyang, 2021; Zhang, 2021).

With regard to secondary schools, particularly in developing education environments, there is limited empirical research examining the practical uses, challenges and opportunities for AI in language learning and assessment. Where by several studies have investigated on the challenges and opportunities of AI, the specific challenges and opportunities arising in the education systems after AI integration has not been sufficiently examines the uses, challenges, and opportunities after AI integration have not been sufficiently examined (Chaudhry, 2022; Guilherme, 2019).

1.1 Research Questions

This study examines the uses, challenges, and opportunities of AI language learning and assessment in secondary schools. The study seeks to answer the following research questions:

1. *What are the uses of AI in language learning and assessment among secondary schools?*
2. *What are the opportunities does AI provide for improving language learning and assessment in secondary schools?*
3. *What challenges associated with the implementation of AI in language learning and assessment among secondary schools?*

2. LITERATURE REVIEW

2.1. Artificial Intelligence in Language Learning

Artificial intelligence in education is the use of computer systems capable of performing tasks that normally require human intelligence, such as learning, reasoning, pattern recognition, and decision-making, as noted by Matthew N.O. Sadiku (2022). In language education, AI technologies support personalized instruction, provide automated feedback, and enhance interactive learning experiences (Shidiq, 2023). AI-powered systems, such as intelligent tutoring systems, natural language processing tools, and speech recognition software, assist students in improving grammar, vocabulary, pronunciation, and writing skills (Chen et al., 2021). Traditionally, language learning in secondary schools relied on teachers' instruction, textbooks, and manual exercises. While these approaches remain essential, they often limit opportunities for individualized learning due to large class sizes and limited instructional time. AI technologies solve these challenges by providing adaptive learning platforms that adjust content based on students' skill levels and learning speed (Luan, 2020). These systems analyze learners' responses and provide quick corrective feedback, which enhances understanding and retention of language concepts (Yang, 2020).

2.2. AI-Based Language Assessment Technologies

Assessment is a core component of language education because it measures students' competence and guides instructional decisions. Traditionally, the language assessment methods include written tests, oral examinations, and manual grading, which led to time-consuming and subjective. AI-based assessment technologies, such as automated essay scoring systems and speech evaluation tools, were introduced to improve efficiency and consistency in grading (Chen et al., 2021). Automated assessment systems use algorithms to evaluate grammar, coherence, vocabulary usage, and pronunciation. These systems provide faster results and detailed feedback, enabling students to identify areas for improvement (Almusharraf & Alotaibi, 2023). Moreover, AI can generate performance analytics that help teachers to monitor students' progress easily (Yonghe, Bowen, & Xiaoling, 2017). The integration of AI into assessment supports evaluation and reduces teachers' administrative workload, giving them more time for teaching and learning (Lu, 2021).

2.3. Contribution of AI to Language Learning and Assessment

Artificial intelligence plays an important role in improving the quality and effectiveness of language learning and assessment. One of the major contributions of AI is personalization, whereby AI systems tailor learning content to individual student needs, AI promoting self-paced and learner-centered education (Luan, 2020). Feedback from AI tools enhances active learning and also helps students to correct errors (Shidiq, 2023). AI improves objectivity and consistency in grading in assessment by decreasing human bias. Automated systems provide faster turnaround times for results (Chen, Zou, Xie, & Cheng, 2021). AI-generated analytics support data-driven decision-making, helping teachers and administrators to identify performance trends and implement timely interventions (Yang, 2020). These capabilities improve academic accountability and overall learning outcomes in secondary schools (Popenici & Kerr, 2017).

2.4. Adoption of AI in Secondary Schools

The successful implementation of AI in secondary schools depends on user acceptance and institutional readiness. The Technology Acceptance Model (TAM) explains that perceived usefulness and perceived ease of use influence technology adoption. Teachers and students adopt AI tools if they find them beneficial, reliable, and easy to operate (Edward et al., 2018). The increasing access to internet connectivity and digital devices creates opportunities for AI integration in many secondary schools. However, adoption is influenced by factors such as teacher training, digital literacy, technical support, infrastructure availability, and supportive policies (Xu, 2020). Schools with access to ICT resources are more likely to successfully integrate AI into language learning and assessment practices (Hrastinski, Olofsson, & Arkenback, 2019).

2.5. Challenges in Implementing AI for Language Learning and Assessment

Despite the advantages of AI integration in secondary schools, language education faces significant challenges, such as Limited ICT infrastructure, unstable internet connectivity, and insufficient access to digital devices, which hinder effective implementation, particularly in resource-constrained environments. Additionally, high costs associated with AI software acquisition, maintenance, and training limit adoption, hence becoming a challenge (Baber et al., 2023).

Ethical concerns also come up as another significant challenge. AI systems collect and analyze student data, raising concerns about data privacy, security, and informed consent, as said by Akgun et al. (2021). Moreover, overreliance on AI tools reduces human interaction in language learning, potentially affecting the development of communicative competence (Hrastinski et al., 2019). Resistance to change among teachers and uncertainty about the reliability of automated assessment systems may slow adoption, posing a challenge (Almusharraf et al., 2023). Addressing these challenges requires institutional support, clear regulatory frameworks, teacher training, and equitable access to technology (Homles et al., 2023).

3. METHODOLOGY

3.1. Research Design

The study uses a mixed-methods design to analyze the uses, challenges, and opportunities of Artificial Intelligence in language learning and assessment in secondary schools. The research design integrates quantitative and qualitative methods to gain a comprehensive understanding of how AI technologies are applied in language education and how they influence teaching and assessment practices. This approach is suitable because it captures real educational situations as they exist while allowing in-depth exploration of respondents' experiences, perceptions, and challenges related to AI integration.

3.2. Study Area

This study is conducted in selected secondary schools. The schools are responsible for providing language instruction and conducting assessments. The study focuses on secondary schools that have access to digital learning technologies and internet connectivity that may support AI-based language learning and assessment tools. The selected areas provide a relevant environment for examining the integration of AI technologies in real classroom settings.

3.3. Target Population

In this study, the target population includes secondary school students, language teachers, and school administrators. Students are the primary users of AI-based language learning tools; language teachers integrate AI technologies into instruction and assessment practices; and school administrators oversee academic performance, policy implementation, and technology adoption within the school environment.

3.4. Sampling Techniques

This study uses simple random sampling to select students, ensuring equal representation and reducing bias. Purposive sampling is also used to select language teachers and school administrators because of their direct involvement in teaching, technology adoption, and assessment. These sampling techniques ensure that knowledgeable and relevant respondents are included in the study.

3.5. Data Collection Methods

This study uses both primary and secondary methods for data collection. Primary data are collected from respondents to understand their experiences, perceptions, and challenges regarding AI in language learning and assessment. Secondary data are collected from sources such as books, academic journals, policy documents, and research related to AI in education. Using both methods improves the reliability and validity of the findings.

3.6. Data Collection Tools

In this study, questionnaires and interviews are used to collect data. Questionnaires are administered to students to gather quantitative data on their use of AI tools, perceived benefits, and challenges. Interviews are conducted with language teachers and school administrators to collect detailed qualitative information about AI integration, instructional practices, the assessment process, and barriers to implementation. These tools promote the collection of accurate and relevant data aligned with the study objectives.

3.7. Data Analysis

Qualitative data from questionnaires are analyzed using simple statistical techniques, such as frequencies and percentages, to identify patterns and trends in AI usage and its perceived impact. Qualitative data collected from

interviews are analyzed thematically to identify recurring themes related to the uses, challenges, and opportunities of AI in language learning and assessment. Combining both analyses provides a comprehensive interpretation of the findings.

3.8. Ethical Considerations

Ethical principles are strictly observed throughout the study. Permission is obtained from relevant educational authorities and school administrations before data collection. Respondents are informed of the study's purpose, and participation is voluntary. Confidentiality and privacy of respondents are maintained, and collected data are used strictly for academic purposes.

4. RESULTS AND DISCUSSION

4.1. Demographic Information of Respondents

Table 1:

Gender Distribution (N = 1,567)

Gender	Frequency	Percentage (%)
Male	812	51.8
Female	755	48.2
Total	1,567	100

This results show that the gender distribution is fairly balanced, with 51.8% male and 48.2% female respondents. A balanced gender distribution is important because it ensures that the study findings are not skewed toward one gender's perspective, which could introduce bias. In this study, the distribution is well balanced. Both male and female students, as well as teachers, contribute their views on AI in language and assessment, which ensures that the results reflect broader understandings of its uses, opportunities, and challenges. The small difference in numbers doesn't matter much because it does not affect the credibility of the results.

Table 2:

Age Distribution (N = 1,567)

Age Group	Frequency	Percentage (%)
15–18 years	1,020	65.1
19–25 years	238	15.2
26–35 years	187	11.9
36 years and above	122	7.8
Total	1,567	100

Most respondents who participated well in this study were aged 15-18 years, accounting for 65.1% of respondents. This age distribution is expected because the study focuses on secondary schools, and this age range aligns with secondary school students. This age group represents the core students who are directly interacting with AI tools for learning and assessment. The age groups 19-25 and 26-35 are likely to be older students, assistant teachers, or young teachers, and the age group 35+ includes experienced teachers or administrators. This diversity ensures that the results capture both students' learning experiences and teachers' perspectives on AI implementation.

Table 3:

Experience in Teaching or Learning (N = 1,567)

Experience	Frequency	Percentage (%)
1–5 years	790	50.4
6–10 years	370	23.6
11–15 years	245	15.6

16 years and above	162	10.4
Total	1,567	100

This result shows that 50.4% of respondents with 1-5 years of experience are relatively new to the school environment. Moreover, 49.6% have over 6 years of experience, indicating sufficient exposure to traditional learning and assessment methods. This combination allows participants to compare conventional approaches with AI-based systems, yielding richer insights into how AI impacts learning and assessment. This range of experience is important because it reflects both younger students' adaptability to such technology and teachers' readiness to incorporate AI into teaching and assessment.

4.2. Uses of AI in Language Learning and Assessment

Table 4:

uses of AI in Language Learning and Assessment,

S/N	Items	SA	A	D	SD
1	AI provides instant feedback on grammar and writing	780(49.8%)	610(39.2%)	120(7.7%)	57(3.6%)
2	AI improves pronunciation through speech tools	745(47.5%)	640(40.8%)	130(8.3%)	52(3.3%)
3	AI supports personalized learning	810(51.7%)	590(37.7%)	110(7%)	57(3.6%)
4	AI assists automated grading	770(49.1%)	620(39.6%)	125(7.9%)	52(3.3%)
5	AI enhances vocabulary development	730(46.6%)	655(41.8%)	135(8.6%)	47(3%)
6	AI provides adaptive learning pathways	760(48.5%)	630(40.2%)	120(7.7%)	57(3.6%)
7	AI supports real-time formative assessment	750(47.9)	625(40%)	140(8.9%)	52(3.3%)

This table presents respondents' levels of agreement with various uses of AI in language learning and assessment. The results show a high level of positive agreement, with the majority strongly agreeing or agreeing on all items. The highest level of strong agreement was 51.7%, recorded for AI supporting personalized learning, indicating that respondents strongly value AI's ability to tailor learning activities to individual students' needs. AI providing real-time feedback on grammar and writing received 49.8% strong agreement, and AI assisting with automated grading received 49.01% strong agreement, suggesting that participants appreciate AI's speed and efficiency in providing immediate academic support. Moreover, AI enhancing vocabulary development still received strong support, with 46.6% strong agreement and 41.8% agreement, showing that respondents believe AI contributes meaningfully to language enrichment. Overall, the dominance of strong agreement and agreement responses across all items confirms that AI is widely accepted as a practical and beneficial tool in language instruction and assessment.

Table 5:

Descriptive Statistics on the Uses of AI in Language Learning and Assessment

Items	Mean	Standard Deviation
AI provides instant feedback on grammar and writing	4.35	0.88
AI improves pronunciation through speech tools	4.30	0.91
AI supports personalized learning	4.40	0.85
AI assists automated grading	4.32	0.89
AI enhances vocabulary development	4.27	0.93

AI provides adaptive learning pathways	4.34	0.87
AI supports real-time formative assessment	4.29	0.90
Overall mean & standard deviation	4.32	0.89

The results in the table above indicate that AI is widely recognized as a useful tool in language learning and assessment. Personalized learning scored the highest mean of 4.40, showing that participants value AI's ability to adjust lessons and exercises to individual students' needs. Instant feedback on grammar and writing followed with a mean of 4.35, highlighting AI's role in providing immediate guidance to learners. The lowest mean was for vocabulary enhancement at 4.27, but it still showed strong agreement that AI can support learning. The overall mean was 4.32, with a low standard deviation of 0.89, indicating strong consensus among respondents that AI effectively enhances learning, efficiency, accuracy, and personalization.

4.3.Opportunities of AI in Language Learning and Assessment

Table 6:

Opportunities of AI in Language Learning and Assessment

S/N	Items	SA	A	D	SD
1	AI promotes self-paced learning	820(52.3%)	580(37.01%)	120(7.75)	47(3%)
2	AI improves assessment accuracy	790(50.4%)	610(38.9%)	115(7.3%)	52(3.3%)
3	AI supports digital transformation	750(47.9%)	645(42.2%)	120(7.7%)	52(3.3%)
4	AI enables monitoring of student progress	770(49.1%)	630(40.2%)	115(7.3%)	52(3.3%)
5	AI increases student engagement	730(46.6%)	670(42.8%)	120(7.7%)	47(3%)
6	AI facilitates blended learning	745(47.5%)	655(41.8%)	115(7.3%)	52(3.3%)
7	AI enhances accessibility for learners	760(48.5%)	640(40.8%)	120(7.7%)	47(3%)

The results highlight the opportunities that AI provides in educational settings. The findings show strong agreement across all items, indicating that respondents perceive AI as a transformative tool in secondary school language education. The highest percentage of strong agreement, 52.3%, indicates that AI promotes self-paced learning, demonstrating that learners value the flexibility AI offers in allowing them to progress according to their own abilities and speed. Additionally, AI improves assessment accuracy, with 50.4% for strong agreement, and AI monitoring of student progress has a strong agreement of 49.1%, both of which were highly endorsed, reflecting confidence in AI's ability to enhance fairness and track academic performance effectively. Furthermore, respondents agreed that AI supports digital transformation, which increases student engagement, facilitates blended learning, and enhances accessibility for learners. The consistently high percentages of agreement suggest that AI is viewed not only as a supportive tool but also as a strategic innovation capable of improving inclusivity, efficiency, and overall educational quality.

Table 7:

Descriptive Statistics on the opportunities of AI in Language Learning and Assessment

Items	Mean	Standard Deviation
AI promotes self-paced learning	4.42	0.86
AI improves assessment accuracy	4.36	0.88
AI supports digital transformation	4.29	0.92
AI enables monitoring of student progress	4.33	0.90

AI increases student engagement	4.25	0.94
AI facilitates blended learning	4.28	0.91
AI enhances accessibility for learners	4.30	0.93
Overall Mean & SD	4.32	0.91

The table above presents respondents' beliefs that AI offers significant opportunities for language learning and assessment. The highest-rated opportunities, which are self-paced learning, had a mean of 4.42, indicating that learners value the ability to study independently at their own pace. Improved assessment accuracy was also highly valued at a mean of 4.36, as AI reduces human error in grading and evaluation. Also, participants recognized benefits such as better student engagement, accessibility, and blended learning opportunities. The overall mean of 4.32 indicates that respondents strongly agree that AI shows and creates meaningful opportunities to enhance learning quality, inclusivity, and effectiveness in secondary schools.

4.4.Challenges that are associated with the implementation of AI in language learning and assessment among secondary schools

Table 8:

challenges that are associated with the implementation of AI in language learning and assessment among secondary schools

S/N	Items	SA	A	D	SD
1	Limited ICT infrastructure	780(49.8%)	620(39.6%)	120(7.7%)	47(3%)
2	High cost of AI technologies	805(51.4%)	600(38.3%)	115(7.3%)	47(3%)
3	Insufficient teacher training	820(52.3%)	590(38%)	110(7%)	47(3%)
4	Poor internet connectivity	770(49.1%)	615(39.2%)	130(8.3%)	52(3.3%)
5	Data privacy concerns	760(48.5%)	620(39.6%)	135(8.6%)	52(3.3%)
6	Resistance to change	720(45.9%)	640(40.8%)	150(9.6%)	57(3.6%)
7	Over-reliance on AI reduces interaction	700(44.7%)	650(41.5%)	160(10.2%)	57(3.6%)

The table above presents respondents' perceptions of the challenges associated with implementing AI in language learning and assessment. Although AI is generally viewed positively, the results indicated barriers that tend to exist. The most challenging issue identified was insufficient teacher training, which received 52.3% strongly agree responses. This suggests that successful AI integration depends heavily on equipping teachers with the necessary technical and educational skills. The highest cost of AI technologies had 51.4% strongly agreeing, and limited ICT infrastructure had 49.8% strongly agreeing, which is also a major concern and indicates financial and infrastructural constraints within schools. Moreover, issues such as poor internet connectivity and data privacy concerns receive high agreement, indicating awareness of technical and ethical considerations. And over-reliance on AI tends to reduce interaction, receiving comparatively lower strong agreement (44.7%), which still reflects concern that excessive dependence on technology reduces meaningful teacher-to-student engagement. Overall, the responses demonstrate that, despite AI offering considerable benefits, effective implementation requires addressing challenges related to training, funding, infrastructure, and ethics to maximize its impact in secondary school language education.

Table 9:

Descriptive Statistics on challenges that are associated with the implementation of AI in language learning and assessment among secondary schools

Items	Mean	Standard Deviation
Limited ICT infrastructure	4.14	0.96
High cost of AI technologies	4.18	0.94
Insufficient teacher training	4.22	0.89
Poor internet connectivity	4.10	1.01
Data privacy concerns	4.06	0.97

Resistance to change	3.98	1.04
Over-reliance on AI reduces interaction	3.90	1.07
Overall Mean & SD	4.08	0.98

Not only is AI recognized as useful, but it also indicates challenges. The most significant challenge is insufficient teacher training, with a mean of 4.22, which indicates that teachers need more knowledge and skills to integrate AI effectively. The high cost of AI technologies is a challenge, coming up with 4.18 as another barrier, making it difficult for schools to acquire AI tools. Limited ICT infrastructure, with a mean of 4.14, and poor internet connectivity, with a mean of 4.10. Moreover, low-rated challenges show an overreliance on AI, reducing interaction, with a mean of 3.30, indicating that some participants worry about AI replacing human engagement. Overall mean of 4.08 suggests that participants generally acknowledge notable obstacles, but these don't completely outweigh AI's benefits

5. CONCLUSION AND RECOMMENDATIONS

5.1. Conclusion

The study concludes that artificial intelligence is a transformative tool in language learning and assessment in secondary schools. AI improves teaching and learning by providing personalized learning pathways, real-time feedback on grammar and writing, automated grading, and adaptive learning tools that support individual student needs. These technologies also create opportunities for self-paced learning, more accurate assessment, easier monitoring of student progress, and greater student engagement. Moreover, the successful integration of AI depends not only on the availability of technology but also on supportive infrastructure, teacher readiness, and student awareness. Challenges such as limited ICT infrastructure, the high cost of AI tools, insufficient teacher training, poor internet connectivity, data privacy concerns, and resistance to change can affect the adoption of artificial intelligence. Addressing these challenges is crucial to ensuring that AI improves learning outcomes without reducing student-to-teacher interaction or widening the digital divide. Overall, AI in language learning and assessment offers a pathway to more interactive, engaging, and efficient educational experiences. When implemented thoughtfully, it can enhance the quality of learning, assessment accuracy, and accessibility for all students, while preparing learners to thrive in a technology-driven world.

5.2. Recommendations

There should be ongoing professional development programs for teachers to enhance their knowledge and confidence in using AI tools for language learning and assessment. Teachers must understand how to integrate AI effectively into lesson planning, classroom activities, and assessment tasks. Improve ICT infrastructure: Schools should invest in reliable internet connectivity, functional devices, and AI-compatible software to ensure students and teachers can access AI tools without interruption. Offline or "lite" AI versions should also be considered for students in rural or low-resource areas to address limited ICT infrastructure. Prioritize data privacy and security: Institutions must adopt secure systems that protect student information, including encryption, secure login mechanisms, and clear policies that inform students and parents about data usage and protection measures, to avoid cyberattacks that can disrupt operations. Encourage student digital literacy: Programs should be implemented to improve students' ability to use AI tools responsibly, interpret feedback, and engage effectively with digital learning platforms. Integrate AI with existing learning practices: Schools should combine AI technologies with traditional classroom teaching to enhance learning while maintaining human interaction. Blended approaches will help balance technology use and personal teacher support. Monitor and evaluate AI effectiveness: Continuously assess AI's impact on learning outcomes, engagement, and assessment accuracy. Feedback from teachers and students should guide improvements and the selection of appropriate AI tools.

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