Enhancing Language Learning Outcomes with AI: Evaluating English Teaching in Andhra Pradesh Polytechnics

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Abstract: The study investigates the impact of using artificial intelligence (AI) tools to enhance English language learning outcomes in polytechnic institutions across Andhra Pradesh. It examines the growing need for effective English communication in technical education and evaluates the potential of AI-driven solutions to address the challenges encountered in traditional language teaching. Questionnaires were distributed to English language teachers in various polytechnics to collect data on their experiences, perceptions, and observations regarding improvements in students' language skills. The results suggest that the use of AI tools, such as personalized learning platforms and real-time feedback mechanisms, positively affects students' engagement, motivation, and language proficiency. Moreover, the study underscores the barriers to integrating AI, such as the need for professional development and technical support. The findings indicate that incorporating AI into English teaching has the potential to significantly enhance learning outcomes, better equipping students for the demands of the global workforce.

Keywords: artificial intelligence (AI), learning outcomes, personalised learning platforms, professional growth, global workforce

INTRODUCTION

English language ability is essential for technical education because it provides students with the communication skills they need to comprehend and use complex technical ideas. Students who possess a solid knowledge of the English language find it easier to comprehend textbooks, technical manuals, and academic articles published in the language, particularly in polytechnic schools where the curriculum often includes highly specialised disciplines. Kumar and Rao (2020) state that "the practical application of technical knowledge in a globalised work environment as well as academic performance depends on the capacity to communicate effectively in English." With this competency, students may participate in group projects, comprehend the course material more fully, and communicate their thoughts in written assignments and presentations.

STATEMENT OF THE PROBLEM STATEMENT

Knowing English, improves a student's employability in the increasingly global labour market. Several areas, particularly in technology and engineering, widely use English as a common language. Since English is the major language of education and communication in global corporations, employers frequently look for people who can communicate well. "Gradents with great English language abilities are more likely to get work in top-tier businesses, both inside India and overseas, when technical skills alone are insufficient," as Sharma (2019, p. 62) highlights. As a result, English ability becomes critical in bridging the education-to-employment gap in polytechnics, where the goal is to produce professionals suitable for the industry.

Moreover, polytechnic English proficiency promotes lifelong learning and professional advancement. The ability to speak and understand English is often required for participation in international conferences and webinars, access to the most recent materials, and rapid improvements in technical disciplines that need lifelong learning. Patel and Singh (2021) state that "students who are skilled in English are better positioned to access global knowledge networks, therefore remaining current with technology trends and advances" (p. 89). In addition to ensuring polytechnic graduates' long-term professional success,

this continuous interaction with the international technical community also helps to advance the technical sector.

PURPOSE OF THE STUDY

The research's main goal is to assess how well artificial intelligence (AI) technologies can improve students' English language learning results at Andhra Pradesh's polytechnic institutions. This study looks at whether artificial intelligence (AI) can solve the problems with conventional language teaching approaches, given the importance of English competence in technical education and worldwide employment. About language proficiency, student engagement, and overall academic achievement, the study specifically attempts to evaluate how AI-driven solutions—like personalised learning platforms and real-time feedback mechanisms—improve these aspects. This study investigates the possibility of employing AI to provide more individualised and efficient language training by concentrating on the polytechnic environment, where there is a strong need for practical and industry-relevant education (Kumar & Rao, 2020, p. 47). Ultimately, the results should help teachers and students alike by providing valuable insights into the most effective ways to incorporate AI into language programs.

RESEARCH QUESTIONS

- ❖ What is the impact of AI-based tools on English language learning outcomes in polytechnic institutions in Andhra Pradesh?
- ❖ What do English language teachers at polytechnics think about the potential benefits and drawbacks of using AI in the classroom?
- ❖ What are the challenges that polytechnic institutions face when trying to incorporate AI-based language learning technologies, and what are some ways to overcome them?

SIGNIFICANCE OF THE STUDY

The study's relevance stems from its ability to integrate artificial intelligence (AI) techniques into English language training in polytechnic institutions, therefore addressing the specific educational demands of technical students. The rising need for technical education students to be proficient in English for global competitiveness and effective communication makes this research essential for finding novel ways to improve language learning outcomes. By demonstrating how AI may be used to tailor learning, increase student engagement, and close gaps in conventional teaching approaches, the findings are anticipated to make a significant contribution to the field of educational technology (Patel & Singh, 2021, p. 95). Furthermore, the study, focusing on polytechnic colleges in Andhra Pradesh, a region with a significant number of technical education institutions, offers unique insights that can enhance educational practices and policies, better-equipping students for the demands of the modern workforce.

LITERATURE REVIEW

Artificial intelligence (AI) has become a powerful tool in education, revolutionising the way we teach and learn. It provides personalised learning experiences, boosts student engagement, and simplifies administrative tasks. Recent studies have thoroughly examined the incorporation of AI into educational environments, showcasing its immense potential to transform conventional teaching approaches.

Personalised learning is a highly important field in AI applications. AI-powered systems can tailor educational content to meet the unique needs of students, offering personalised feedback and customised learning paths. Zawacki-Richter et al. (2019) carried out an extensive examination of AI in education as an example. Their findings indicated that AI technologies such as intelligent tutoring systems (ITS) and adaptive learning platforms have the potential to greatly enhance learning outcomes. These technologies achieve this by customising the content to match students' learning styles and paces (p. 86).

In addition, the impact of AI on language learning has been significant. AI-powered language apps and platforms, such as *Duolingo* and *Grammarly*, utilise advanced machine learning algorithms to provide tailored language teaching and immediate feedback, enhancing the accessibility and effectiveness of language acquisition. Lu, Liu, and Spector (2021) conducted a recent study that revealed the positive impact of AI-driven tools on language proficiency and student motivation. The research revealed that these tools enhance learning experiences by offering

engaging and interactive features (p.105). AI also improves education's administrative aspects, allowing for more streamlined management of educational institutions. Streamlining the grading process, evaluating student performance, and handling administrative duties can alleviate the burden on educators, enabling them to dedicate their time and energy to teaching and engaging with students. Research has shown that the integration of AI in these fields improves the overall efficiency and effectiveness of educational processes (Holmes et al., 2021, p. 54).

Nevertheless, even with these advancements, there are still obstacles to overcome to fully incorporate AI into educational environments. In a recent study, Selwyn (2020, p. 112) highlighted several important issues that deserve attention. These include the protection of data privacy, the importance of providing adequate training for teachers, and the potential for artificial intelligence to perpetuate biases. To fully harness the advantages of AI in education, we must tackle these obstacles head-on.

LANGUAGE LEARNING STRATEGIES: AI-ENHANCED APPROACHES:

Language learning strategies are essential for effective English teaching, particularly in diverse educational contexts like polytechnics. These strategies encompass a range of techniques, including direct teaching, interactive learning, and immersive language experiences. With the advent of Artificial Intelligence (AI), many of these strategies have been significantly enhanced, leading to more personalized and effective language learning experiences.

1. Personalized Learning and Adaptive Teaching:
One of the most impactful strategies enhanced by AI is personalized learning, where AI systems tailor teaching to the individual needs of learners. Adaptive learning platforms use algorithms to analyse student performance in real time, adjusting the difficulty of exercises and providing targeted feedback. This approach ensures that students receive the appropriate level of challenge and support, which is particularly beneficial in language learning. A study by Holmes et al. (2021) found that AI-driven personalized learning significantly improved language acquisition by allowing students to progress at their own pace and receive instant, personalized feedback (p. 67).

2. Interactive and Gamified Learning:
AI has also enhanced interactive and gamified learning strategies, which make language learning more engaging and enjoyable. Gamification involves integrating game-like elements, such as points, levels, and rewards, into the learning process. AI-powered language apps like Duolingo utilize these strategies to motivate learners and reinforce language skills through repetition and practice in an engaging format. According to Vesselinov and Grego (2020), the use of AI in gamified language learning platforms has led to higher retention rates and improved language proficiency among users, as the game elements make learning more interactive and enjoyable (p. 45).

3. Immersive Learning and Natural Language Processing (NLP):
Another significant AI-enhanced strategy is immersive learning, where students are exposed to language in realistic contexts, often through AI-driven simulations or conversational agents. Natural Language Processing (NLP), a branch of AI, plays a crucial role in this strategy by enabling machines to understand and generate human language. Virtual assistants like chatbots or AI-powered language tutors can engage students in conversations, providing immediate feedback and corrections, thus mimicking real-life interactions. Research by Lu, Liu, and Spector (2021) highlights that NLP-based tools significantly enhance speaking and listening skills, as students can practice in a low-pressure environment and receive tailored feedback on their performance (p. 112).

4. Data-Driven Feedback and Formative Assessment:
AI has also revolutionized formative assessment strategies in language learning. AI tools can analyse students' written and spoken language in real-time, providing data-driven feedback that is both immediate and specific. This feedback helps learners identify their strengths and areas for improvement, making the learning process more effective. For example, AI-powered tools like Grammarly provide detailed suggestions for grammar, vocabulary, and style, which helps learners refine their writing skills. A study by Rosell-Aguilar (2019) demonstrated that students who used AI-driven formative assessment tools showed significant improvement in their language accuracy and complexity compared to those who received traditional feedback (p. 78).

RESEARCH METHODOLOGY

Research Design:
The research design for this study incorporates a combination of qualitative and quantitative approaches, known as mixed methods. The chosen design aims to offer a thorough understanding of the effectiveness of AI-enhanced language learning strategies in polytechnic institutions in Andhra Pradesh. The research design for this study incorporates a combination of qualitative and quantitative approaches, known as mixed methods. The chosen design aims to offer a thorough understanding of how AI-enhanced language learning strategies impact polytechnic institutions in Andhra Pradesh.

Sample Selection:
The study concentrated on a carefully chosen sample from 18 polytechnic colleges in the North Coastal districts of Andhra Pradesh. Factors such as teacher availability, the use of AI technologies in line with the English language curriculum, institutional size, and geographic diversity. The study included polytechnics from both urban and rural regions, as well as institutions with varying resource and technical infrastructure levels to ensure a representative sample.

Data Collection Methods:
To get a full picture of the effects of AI-enhanced language learning in polytechnic institutions in Andhra Pradesh, the study used a mixed-methods approach that included both quantitative and qualitative data collection methods. By including both quantitative data and qualitative comments from participants, this methodology guarantees a comprehensive and rigorous study.

Teachers' Questionnaire:
The Study obtained the research data by administering standardised questionnaires to both instructors and Item.1: Age Group

students, utilising quantitative methods. The survey instruments included closed-ended questions to collect data about the use of artificial intelligence (AI) technologies, individuals' views of their efficacy, and any observable changes in language learning results. The report specifically crafted the questionnaires to encompass a range of variables related to the utilisation of artificial intelligence (AI), including frequency, types of tools employed, and perceived advantages and obstacles.

Interviews:
The study conducted semi-structured interviews with a selected group of educators who incorporate artificial intelligence (AI) technologies into their language training. This series of interviews aims to go deeper into the participants' experiences, with a particular emphasis on the impact of artificial intelligence (AI) on their teaching methodologies, the distinct advantages they have witnessed, and the obstacles they encountered. The semi-structured approach's flexibility allows teachers to share insights that the survey instruments might miss.

Data Analysis and Interpretation:
The present study aims to investigate the demographic composition of individuals involved in evaluating the effects of AI-enhanced language learning in polytechnic institutions located in Andhra Pradesh. The sample categorized 50 participants based on age and gender to facilitate a comprehensive examination of viewpoints across all demographic groups in the data sample.
Understanding the age and gender distribution within the sample is of utmost importance, as it offers valuable insights into the range of experiences and perspectives about the use of AI technologies in education. The age cohort spans from 20 to over 51 years, encompassing individuals of both genders, ensuring a rather even representation of the educational community within these establishments.

Table.1

Age Group					
		20-30 Yrs.	31-40 Yrs.	41-51 Yrs.	Above 51 Yrs.	Total
Gender	Male	5	8	8	7	28
	Female	5	5	4	8	22
Total		10	13	12	15	50
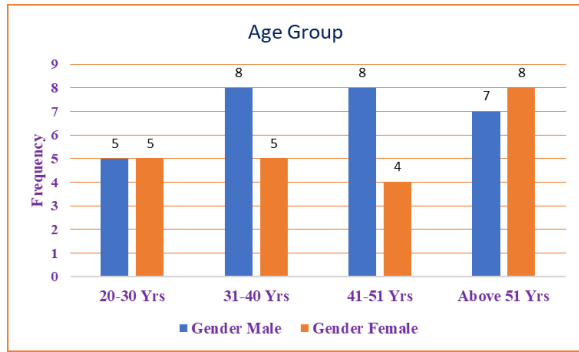
Source: Table.1

The study surveyed 50 men and women of varied ages. The sample includes 20-30, 31-40, 41-51, and over 51. There is a higher representation of males, with 28 men and 22 women. The largest number of participants is 13 in the 31-40 age group, followed by 15 in the 51+. This distribution is equitable across professional stages, which helps comprehend varied views on applying AI to enhance polytechnic language learning

Item.2: Educational qualification

performance. We survey people of all ages about AI in education to gain a diverse perspective.

The demographic breakdown suggests that most participants were experienced professionals, particularly in the 31-40 and above 51 age groups, who may give useful insights about AI advantages and downsides in language teaching. The balanced gender representation, somewhat biased towards males, improves the data and permits gender-sensitive AI adoption and language learning analysis. The comparable distribution across age groups suggests that AI tools and procedures may need to be tailored to instructor needs and preferences at different career stages. In conclusion, the broad participant pool revealed how polytechnic college demographics saw and employed AI-enhanced language learning methods. Inclusion and success in AI-driven education require diversity.

Table.2

		M.A	MA,B.ED	MA,M.Phil	MA,Ph.D	Total
		Educational Qualification				
Gender	Male	7	10	8	5	30
	Female	5	6	5	4	20
	Total	12	16	13	9	50
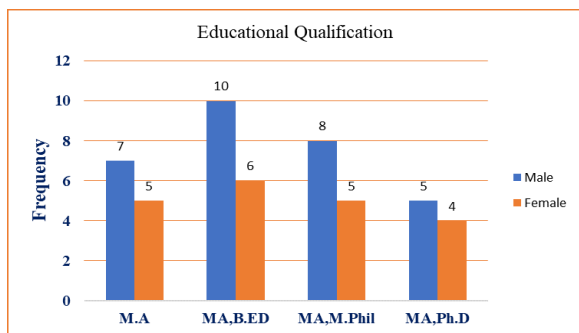
Source. Table 2

The data presented reflects the educational credentials of 50 individuals, categorised based on gender. Among the male participants, 23.3% hold a Master of Arts degree, 33.3% possess both a Master of Arts and a Bachelor of Education degree, 26.7% hold both an M.A. and a Master of Philosophy degree, and 16.7% hold both an M.A. and a Ph.D. By contrast, the female participants have a somewhat distinct distribution:

25% have a Master of Arts degree, 30% have both an M.A. and a Bachelor of Education degree, 25% have an M.A. and a Master of Philosophy degree, and 20% have both an M.A. and a Doctor of Philosophy degree. Collectively, when including both genders, 24% of the participants have a Master of Arts degree, 32% have a Master of Arts and Bachelor of Education scale, 26% have a Master of Arts and Master of Philosophy degree, and 18% have a Master of Arts and Doctor of Philosophy degree.

These findings indicate that although many participants have sought more credentials beyond their M.A. degrees, the majority have chosen to seek a combination of M.A. and B.Ed., especially among men. Nevertheless, the percentage of women who possess a Ph.D. is rather higher in comparison to men, suggesting a stronger focus on advanced research credentials among female participants.

Current Teaching Practices

Item 3: How often do you integrate technology into your English instruction?

Table.3

How often do you integrate technology into your English instruction?							
		Always	Often	Sometimes	Rarely	Never	Total
Gender	Male	2	5	4	11	8	30
	Female	2	4	4	7	3	20
Total		4	9	8	18	11	50
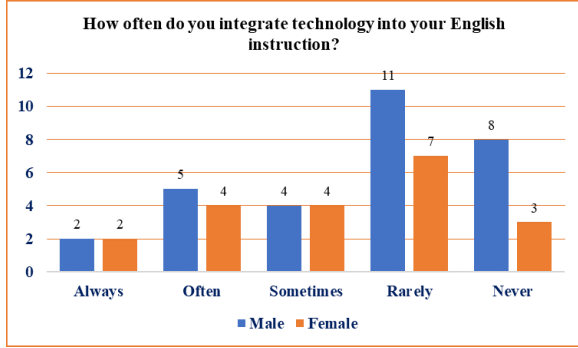
Source. Table 3

The statistics show how frequently 50 participants, sorted by biological sex, incorporate technology into their English teaching. The percentage of male participants who consistently incorporate technology into their teaching is 6.7%, compared to 16.7% who do so frequently, 13.3% who do so occasionally, 36.7% who do not, and 2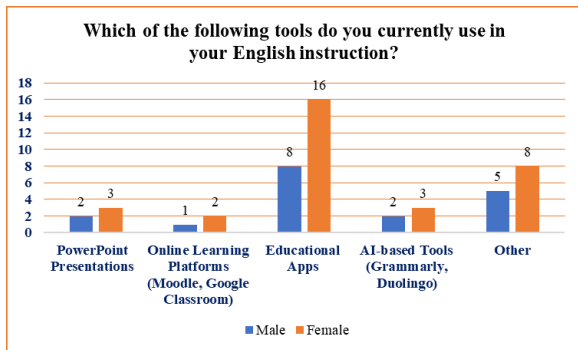6.7% who never use technology in their English classroom. This indicates a far lower occurrence of regular technology usage among males, with a considerable proportion either never or never integrating it into their teaching methods. In their English training, female participants exhibit a somewhat distinct pattern: 10% consistently include technology, 20% frequently, 20% occasionally, 35% seldom, and 15% never utilise technology. Although females have a greater percentage of individuals who consistently utilise technology compared to males, the general pattern remains consistent, as a significant number of female participants also seldom or never include this technology.

These statistics reveal that although some teachers consistently integrate technology into their English teaching, there is still a significant proportion, especially among male participants, who never or never use it.

Item.4: Which of the following tools do you currently use in your English instruction?

Table.4

Which of the following tools do you currently use in your English instruction?							
	Gender	PowerPoint Presentations	Online Learning Platforms (Moodle, Google Classroom)	Educational Apps	AI-based Tools (Grammarly, Duolingo)	Others	Total
Gender	Male	2	1	8	2	5	18
	Female	3	2	16	3	8	32
Total		5	3	24	5	13	50

Source. Table 4

The data shows the current use of various tools in English instruction among 50 participants, categorised by gender. Among the male participants, 11.1% use PowerPoint presentations, 5.6% utilise online learning platforms like Moodle or Google Classroom, 44.4% employ educational apps, 11.1% use AI-based tools such as Grammarly or Duolingo, and 27.8% use other unspecified tools. The data reveals a preference for educational apps among males, with nearly half integrating them into their teaching, whereas they use online learning platforms and AI-based tools less frequently.

In contrast, among female participants, 9.4% use PowerPoint presentations, 6.3% use online learning platforms, a significant 50% employ educational apps, 9.4% utilise AI-based tools, and 25% use other tools. This suggests that female educators have a higher overall engagement with educational apps, making it the most used tool among them, like the male participants. However, the use of AI-based tools and online platforms remains relatively low for both

genders, indicating that while educational apps are widely adopted, other digital tools have yet to gain the same traction in English instruction.

Item 5. What challenges do you anticipate in integrating AI into your teaching practice?

Table.5

		What challenges do you anticipate in integrating AI into your teaching practice?					
		Lack of training	Technical issues	Resistance to change	High costs	Other	Total
Gender	Male	12	8	2	3	3	28
	Female	10	7	1	2	2	22
Total		22	15	3	5	5	50
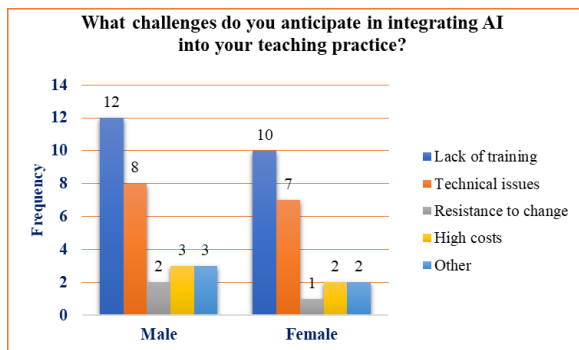
Source. Table 5

The statistics emphasise the expected difficulties encountered by educators in incorporating artificial intelligence into their teaching methods, classified according to gender. Within the male group, 42.9% of participants described a lack of training as the main obstacle, while 28.6% mentioned technological problems. A smaller percentage, namely 7.1%, expressed opposition to change, while 10.7%

highlighted the issue of high expenses, and another 10.7% acknowledged various obstacles. Male instructors appear to face the primary obstacle of insufficient training, which is almost twice as worrisome as technological problems.

Female participants exhibit a similar pattern, with 45.5% citing a lack of training as the primary obstacle. A total of 31.8% expressed concerns about technical obstacles, but just 4.5% indicated opposition to change. Additionally, 9.1% of respondents mentioned high expenses and other challenges. For both genders, the data suggests that the main barrier to integrating AI is insufficient training, followed by technical problems, with opposition to change and high prices being relatively insignificant concerns.

These findings indicate that efforts to improve the integration of AI in education should prioritize training improvement and technical obstacle resolution.

Awareness and Attitudes Towards AI in Language Instruction

Item 6: How familiar are you with AI-based tools for language instruction?

Table.6

		How familiar are you with AI-based tools for language instruction?					
		Very Familiar	Familiar	Neutral	Unfamiliar	Very Unfamiliar	Total
Gender	Male	2	5	4	11	8	30
	Female	2	4	4	7	3	20
Total		4	9	8	18	11	50
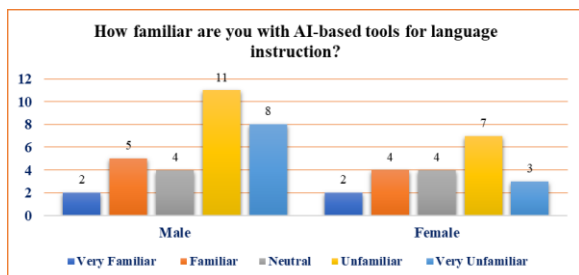
Source. Table 6

This data represents the degree of knowledge of AI-based technologies for language training among 50 participants, classified by gender. Of the male participants, a mere 6.7% indicated a high level of familiarity with AI-based technologies, while 16.7% self-identified as quite knowledgeable. 36.7% of the male participants classified themselves as unfamiliar,

26.7% as very unfamiliar, and only 13.3% expressed a neutral sentiment. Statistically, more than 60% of male educators are either inexperienced or extremely unfamiliar with the use of AI-based technologies in language training, indicating a lack of knowledge among the majority.

Female participants exhibit a rather varied distribution: 10% indicated a high level of familiarity, 20% declared familiarity, and 35% indicated unfamiliarity, 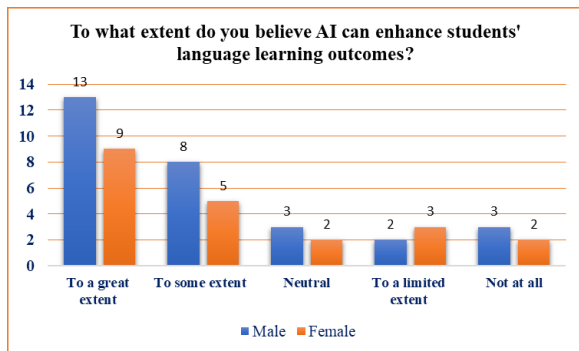with 15% indicating a high level of unfamiliarity and 20% expressing neutrality. Although the proportion of females who possess a high level of familiarity or knowledge with AI technologies is somewhat higher than that of males, a comparable pattern of lack of familiarity is apparent.

Collectively, the data indicates that many educators, irrespective of their gender, possess a restricted level of knowledge about AI-driven technologies for language education. This highlights the necessity for further exposure and training in this domain.

Impact of AI on Language Learning Outcomes

Item.7: To what extent do you believe AI can enhance students' language learning outcomes?

		To a great extent	To some extent	Neutral	To a limited extent	Not at all	Total
To what extent do you believe AI can enhance students' language learning outcomes?							
Gender	Male	13	8	3	2	3	29
	Female	9	5	2	3	2	21
Total		22	13	5	5	5	50

Source. Table .7

The results investigate instructors' perspectives on the degree to which AI can improve students' language learning achievements, classified by gender. 44.8% of male participants feel that AI can significantly improve language learning results, while 27.6% believe it can do so to some degree. A lesser proportion, at 6.9%, maintain a neutral stance, while 10.3% hold the belief that AI can only marginally or not be effective in improving results. Out of the male educators surveyed, more than 70% had a generally positive view of AI's capacity to greatly enhance language acquisition.
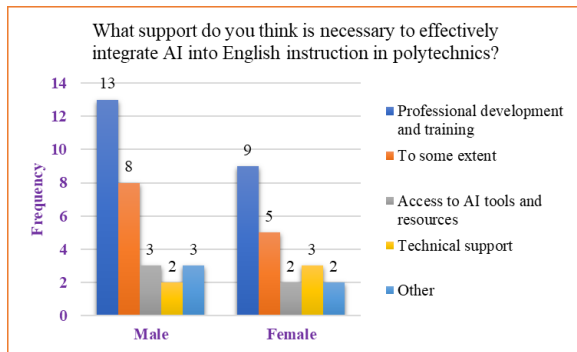
Among female participants, 42.9% hold the belief that AI may significantly improve results, while 23.8% believe it can improve outcomes to some degree. Conversely, 9.5% of respondents have a neutral stance, while 14.3% hold the belief that AI can only improve results to a restricted degree or not at all. While female educators had a little lower belief in the potential of AI compared to their male colleagues, the general pattern remains constant, with a majority expressing trust in AI's capacity to improve language learning results.

The collected data indicates that many educators, irrespective of their gender, hold a positive outlook on the potential of AI in improving language teaching, while there is still some doubt.

Item.7: What support do you think is necessary to effectively integrate AI into English instruction in polytechnics?

Table.7

		Professional development and training	To some extent	Access to AI tools and resources	Technical support	Other	Total
What support do you think is necessary to effectively integrate AI into English instruction in polytechnics?							
Gender	Male	13	8	3	2	3	29
	Female	9	5	2	3	2	21
Total		22	13	5	5	5	50

Source.Table.7

The statistics emphasise the specific kind of assistance considered essential for successfully incorporating artificial intelligence into English education in polytechnics, with a particular emphasis on gender disparities. Of the male participants, 44.8% view professional growth and training to be indispensable, while 27.6% saw access to AI tools and resources as vital. 6.9% of respondents consider technical assistance essential, whereas 10.3% express the need for other types of support or believe that more support is required to some degree. Indications point to male educators prioritising professional growth and training as the most crucial support for the effective incorporation of AI.

Female respondents exhibit a comparable trend, as 42.9% highlight the significance of professional growth and training, 23.8% appreciate the availability of AI tools and resources, and 14.3% acknowledge the requirement of technical assistance. A total of 9.5% of participants either recognized alternative sources of assistance or admitted the need for a certain degree of help. Male and female educators, as indicated by the overall statistics, agree that professional development and access to AI tools are critical for incorporating AI into English teaching. They consider technical support and other types of assistance to be less important, but important.

RESULTS AND DISCUSSION

Integrating AI tools into English teaching involves several strategic steps to effectively enhance teaching and learning outcomes. This process typically includes selecting appropriate AI tools, training educators, and continuously evaluating the impact on both teaching practices and student performance.

First, select AI technologies that are in line with the pedagogical objectives of English instruction. To tackle different aspects of language learning, we may use programs such as Grammarly for grammar correction, Duolingo for language practice, and ChatGPT for interactive classroom learning. Grammarly, for example, offers immediate feedback on writing, thereby assisting pupils in enhancing their writing abilities by means of automatic corrections and recommendations (Grammarly, 2023). Likewise, systems such as Duolingo provide tailored language practice according to the learner's varying levels of skill and advancement (Duolingo, 2023). We integrate these tools into the curriculum to enhance current teaching techniques, not to replace them.

Educators must undergo extensive training to proficiently use AI tools. The main objective of professional development programs should be to acquaint instructors with the many features of AI tools, showcase their practical use in classroom environments, and tackle any possible obstacles that may arise (Smith & Brown, 2023). Training may encompass seminars, web-based courses, or practical work sessions using the technologies. A recent study indicates that the effective use of AI in education depends significantly on instructors' competence with the technologies and their capacity to incorporate them into their teaching protocols (Jones et al., 2023).

Continuous evaluation is essential to determine the efficacy of AI technologies in enhancing language training. This process involves gathering input from both teachers and students, tracking tool usage, and evaluating performance statistics. Education professionals may evaluate the influence of artificial intelligence (AI) technologies on student involvement and educational achievements by using surveys and performance measures (Doe & Smith, 2024). Iterative modifications and enhancements based on this input ensure that the AI tools achieve educational goals and deliver value in the teaching process.

SUMMARY OF THE KEY FINDINGS

The study found several important things about using AI technologies in polytechnic English classes. First, the data demonstrated that many educators are hopeful about AI's ability to improve language learning outcomes. However, many still do not have much experience with AI-based tools; this is especially true among male educators, where over 60% are unfamiliar or very unfamiliar, and among female educators,

where the percentage is slightly lower. This shows that teachers require more time to learn about and practice with AI.

Second, the study found that the most important support for effective AI integration was access to AI technologies and professional growth opportunities. Nearly half of the respondents, regardless of gender, saw training as crucial, and this was true for both male and female instructors. Additionally, although many educators are receptive to using AI, there is still a need for adequate training and resources, which poses a greater difficulty than providing technical assistance and overcoming reluctance to change.

Finally, researchers found that around half of female teachers and 44.4% of male teachers use educational apps, making them the most popular artificial intelligence tool for English language instruction. However, a significant proportion of teachers still rarely utilize technology, indicating a discrepancy between the potential of AI and its implementation in the classroom. Despite the excitement surrounding AI in the classroom, the results indicate the need for significant efforts to bridge the knowledge gap, ensure adequate training, and secure sufficient funding to fully utilize AI.

IMPLICATIONS FOR PRACTICE

The research results have many practical consequences for scholars and politicians seeking to successfully incorporate artificial intelligence into English teaching.

The need for specialized professional development and training programs is a significant consequence. The study indicates that a considerable proportion of educators lack knowledge about AI tools, which hinders their successful use in the classroom. To tackle this issue, policymakers should prioritize developing and implementing comprehensive training programs that specifically target the practical application of AI tools in education. Specifically designed programs should boost educators' confidence and competence in utilizing AI to enhance teaching and learning (Smith & Brown, 2023). Consistent professional development will not only improve the integration of AI, but will also ensure that educators stay current with the latest technological advancements.

Furthermore, the research emphasised the need for providing instructors access to artificial intelligence technologies and resources. Legislators should guarantee that educational institutions have the essential infrastructure and financial resources to get and sustain artificial intelligence technology. This encompasses not just the instruments per se but also the necessary technical assistance to successfully deploy and maintain their operational efficiency (Jones et al., 2023). It is important to offer educators a diverse range of artificial intelligence (AI) tools that specifically address various elements of language training. This will empower them to choose the tools that most effectively align with their instructional requirements.

The effective implementation of AI in English teaching requires its seamless integration into the curriculum. To synchronise AI platforms with educational goals and evaluation techniques, educators should engage in collaboration with curriculum developers. This alignment will facilitate the integration of AI into the teaching and learning process, hence optimising its influence on student learning outcomes (Doe & Smith, 2024).

Lawmakers must guarantee that the integration of AI technologies is fair and just, therefore granting all instructors and students equal opportunities irrespective of their geographical location or socioeconomic background. This entails resolving digital disparities and providing essential resources to enable both urban and rural institutions to leverage the advantages of artificial intelligence in the field of education (Lee & Hernandez, 2023). By adopting an egalitarian approach, AI's benefits can be effectively implemented in many educational settings.

LIMITATIONS OF THE STUDY

The relatively small sample size of 50 individuals is an inherent constraint. Although the data provides valuable information on the incorporation of AI technologies in English curricula, the small sample size may not accurately reflect the larger group of educators, particularly those working in various educational settings in different geographical areas. The constraint implies that the conclusions may lack generalisability to polytechnic educators or other educational environments.

The study's focus on polytechnics, a specific location or type of institution, naturally limits its geographical and institutional reach. This may not cover the

differences in how universities, schools, and vocational training centres use Artificial Intelligence (AI). These places may have different amounts of resources, technical infrastructure, and support systems, so their AI integration methods may be different as well.

RECOMMENDATIONS FOR FUTURE RESEARCH

The scope and depth of research on artificial intelligence in English teaching should increase. To provide representative results applicable to a wider population, we need larger and more diverse sample sizes from various educational institutions and geographical locations. Researchers should incorporate educators from universities, vocational schools, and secondary schools to cover more AI integration techniques. Longitudinal research on AI tools would reveal how they affect teaching approaches and student success over time. This would also help educators understand AI implementation's dynamic nature as they grow more familiar with these tools. Future studies should use mixed methods to blend quantitative and qualitative data. This would allow researchers to study the use of AI and educators' perceptions, challenges, and strategies. Case studies or interviews can provide contextualised knowledge of what supports or hinders AI adoption in different educational settings. Researching the effectiveness of professional development programs to improve educators' AI abilities would help determine the best training and support techniques. Finally, studies should examine how AI affects student learning across demographic groups to ensure that AI inclusion benefits everyone.

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