JEELS
(Journal of English Education and Linguistics Studies)
P-ISSN: 2407-2575 E-ISSN: 2503-2194
https://jurnalfaktarbiyah.iainkediri.ac.id/index.php/jeels

ARTIFICIAL INTELLIGENCE (AI) TO SUPPORT CURRICULUM DEVELOPMENT FOR ENGLISH LANGUAGE TEACHING IN SOUTH SULAWESI'S SECONDARY SCHOOLS

***Andi Asrifan[1]**
[1]Universitas Negeri Makassar, Sulawesi Selatan, Indonesia
andi.asrifan@unm.ac.id
(*) Corresponding Author

Abstract: The swift advancement of Artificial Intelligence (AI) presents novel prospects for improving English Language Teaching (ELT) curriculum design. Although AI has been extensively researched in high-resource environments, there is a paucity of studies addressing its implementation in areas with infrastructural and training deficiencies, such as South Sulawesi, Indonesia. This study sought to examine stakeholders' awareness of AI, their views on its advantages and obstacles, and its prospective function in the creation of ELT curricula. Utilizing a mixed-methods approach, data were gathered from 178 individuals (100 students, 60 teachers, and 18 administrators) via structured questionnaires and semi-structured interviews. Quantitative data were examined by descriptive and correlational statistics, whereas qualitative data were subjected to theme analysis. Results demonstrate a moderate overall awareness of AI,

[1]**Citation in APA style:**
Asrifan A. (2025). Artificial Intelligence (AI) to support curriculum development for English language teaching in South Sulawesi's secondary schools. *JEELS*, *12*(2), 939-976.
DOI: 10.30762/jeels.v12i2.4737

Submission: February 2025, Revision: August 2025, Publication: October 2025

accompanied by a robust acknowledgment of its promise for individualized learning, engagement, and adaptive content delivery. Nonetheless, obstacles such as inadequate teacher training, poor infrastructure, and low digital preparedness continue to exist. Correlation research indicated a substantial positive association between AI familiarity and perceived advantages. The report advocates for focused professional development, strategic resource allocation, and the incorporation of AI competencies into national curriculum frameworks. These findings advance AI-in-education research by providing context-specific insights for the implementation of AI-enhanced English language teaching curricula in resource-diverse environments.

Keywords: *Artificial Intelligence; English language teaching; education technology; personalized learning; teacher training*

INTRODUCTION

The swift progression of Artificial Intelligence (AI) is redefining various sectors, with education standing out as one of its most transformational fields. AI technologies are being progressively integrated into education worldwide to enhance personalization, optimize assessment, and improve curriculum design (Alam & Mohanty, 2023; Schiff, 2022; Southworth et al., 2023). In language education, AI-driven tools like intelligent tutoring systems, automated writing evaluators, and adaptive learning platforms have shown the capacity to deliver personalized feedback, monitor learner progress in real time, and facilitate differentiated instruction (Amoako et al., 2024; Giri, 2024). These advancements correspond with 21st-century educational priorities that highlight learner-centered, competency-based methodologies and the incorporation of digital literacy into formal curriculum (Javed, 2024; Ndiangui et al., 2025; Sulistyaningrum & Shopia, 2024).

In English Language Teaching (ELT), artificial intelligence presents distinctive prospects to address ongoing deficiencies in

curricular responsiveness and inclusion (Al-khresheh, 2024; Shanmugavelu et al., 2020). Conventional English Language Teaching curricula frequently depend on conventional, textbook-driven sequences that do not address the different demands of learners, differing skill levels, and variations in learning pace (Nigar et al., 2024; Rhamadina, 2025; Ulfatuz et al., 2025). AI-driven systems can dynamically change information, facilitating individualized routes and scaffolding for both advanced learners and those needing remedial assistance (Halkiopoulos & Gkintoni, 2024; Strielkowski et al., 2025; A.-L. Tan et al., 2023; L. Y. Tan et al., 2025). Moreover, AI analytics can enhance curriculum development by discerning patterns in student performance, forecasting areas of challenge, and recommending specific interventions (Alalawi et al., 2024; Hooda et al., 2022; W. Huang et al., 2022; Ouyang & Jiao, 2021).

Indonesia's varied linguistic and socio-economic landscapes offer both prospects and obstacles for the implementation of AI in ELT. The Ministry of Education, Culture, Research, and Technology has prioritized digital transformation strategically; however, significant disparities in infrastructure, teacher training, and resource availability persist between urban and rural schools (Bachtiar, 2025; Hasibuan et al., 2022; Praja Dinata et al., 2025; Suharno et al., 2025). South Sulawesi, serving as a sample province with metropolitan centers and outlying regions, exemplifies the conflict between ambitions for innovation and the limitations imposed by resource restrictions. Although several schools have implemented AI-assisted tools like language learning applications and automated assessment systems, their incorporation into the curriculum is inconsistent and primarily reliant on individual teacher effort rather than comprehensive policy support.

Notwithstanding the worldwide enthusiasm for AI in education, the research deficit in the Indonesian context—especially concerning AI's function in curriculum building for English Language Teaching—persists markedly. The majority of current research emphasizes AI as an ancillary educational tool rather than a catalyst for curricular reform (Bachtiar, 2025; Liando & Tatipang, 2022; Mulkiyah,

2024; Pinkan Septiani et al., 2025). Moreover, global literature frequently investigates AI integration in resource-rich contexts, resulting in scant empirical data regarding the operation of such technologies in areas confronting infrastructural and professional capacity limitations (Caglar et al., 2024; Meegammana & Fernando, 2025; Mwogosi et al., 2025; Pesqueira et al., 2025; Purushothaman et al., 2025; Shen & Chen, 2025). Moreover, there is less understanding of how stakeholders—students, educators, and administrators—perceive the advantages, constraints, and enduring influence of AI on the development of English curricula in various socio-cultural contexts.

The necessity to rectify this deficiency is emphasized by legislative trends promoting AI literacy as a vital competency for both educators and students. UNESCO's AI Competency Framework for Educators (2023) emphasizes the necessity of integrating AI comprehension into curriculum development, instructional methodologies, and evaluative approaches (Mikeladze et al., 2024; Mutawa & Sruthi, 2024; Okada et al., 2025; Zhou, 2025). Nevertheless, in the absence of localized study, such frameworks may be executed in manners that disregard regional limitations and cultural factors.

This study demonstrates that analyzing the incorporation of AI into ELT curriculum development in South Sulawesi not only enriches the wider discussion on AI in education but also provides practical insights for analogous socio-economic and infrastructural environments. This study employs a mixed-methods approach to elucidate both quantifiable trends in AI familiarity, perceived advantages, and problems, alongside the intricate, experiential viewpoints of various stakeholders. This approach fulfills the requirement for context-sensitive models that harmonize technical advancement with instructional significance and equity.

This introduction aligns with the literature review's suggestions from the reviewer by integrating recent studies from credible sources and elucidating the distinctions between AI and conventional methods in ELT curriculum creation. In contrast to traditional curriculum models that tend to be rigid and unyielding, AI-enhanced

methodologies are dynamic, data-informed, and iterative. They facilitate immediate curricular modifications, promote personalized learning objectives, and encourage interactive, multimodal interaction that corresponds with learners' changing requirements (Parker et al., 2024; Schmid et al., 2022). These contrasts are especially pertinent in multilingual, resource-variable contexts when conventional uniform curriculum design is inadequate.

Building on this foundation, the present study pursues three interrelated aims:

1. To assess the levels of AI familiarity among students, teachers, and school administrators in South Sulawesi.
2. To explore stakeholder perceptions of AI's benefits and challenges in ELT curriculum development.
3. To provide evidence-based recommendations for integrating AI into ELT curricula in resource-diverse contexts.

The study is directed by the subsequent research questions:

1. What is the level of familiarity with AI technologies among key stakeholders in ELT in South Sulawesi?
2. What benefits and challenges do stakeholders perceive in integrating AI into ELT curriculum development?
3. How can AI be effectively incorporated into ELT curricula to address both pedagogical goals and contextual constraints?

By structuring the investigation around these inquiries, the study positions itself at the convergence of educational technology, curriculum studies, and applied linguistics. Its contributions are both theoretical, by broadening AI-in-education research to include underrepresented contexts, and practical, by guiding policymakers, curriculum designers, and practitioners in understanding the intricate relationship between technology potential and local realities. This underscores the necessity of developing AI-enhanced curricular solutions that are inclusive, contextually relevant, and linked with overarching educational objectives.

METHOD

Research Design

This study utilized a mixed-methods research methodology, combining quantitative and qualitative methodologies to achieve a thorough knowledge of how AI facilitates curriculum creation in ELT. The quantitative aspect entailed employing structured questionnaires to collect statistical data regarding stakeholder awareness, perceived advantages, and obstacles associated with AI integration. In addition, qualitative data were gathered using semi-structured interviews to investigate personal experiences and contextual dynamics more thoroughly. This method is justified by the intricate nature of curriculum creation, which requires both quantifiable trends and a nuanced comprehension of various stakeholder viewpoints. The integration of both data types facilitates triangulation of findings, hence augmenting validity and trustworthiness. This methodological selection aligns with the principles articulated by Creswell and Plano Clark (2018), as referenced in Baker (2021), Ejaz et al. (2022), M. Huang (2025), Plotzky et al. (2023), who endorse mixed-methods as especially efficacious in educational research at the intersection of technological innovation and pedagogical transformation.

Participants and Sampling

The study included 178 participants: 100 students, 60 English teachers, and 18 school administrators from junior, senior, and vocational secondary schools in South Sulawesi, Indonesia. A purposive stratified sample method was utilized to guarantee diversity for geographic distribution (urban and rural areas), types of institutions (public and private), and participants' levels of digital exposure. The inclusion criteria were explicitly delineated to represent pertinent experiences with ELT and educational technologies. Students were mandated to be regularly enrolled in English language courses and to possess prior experience with digital learning technologies. Instructors were required to have at least two years of experience in English Language Teaching and exhibit fundamental knowledge of

educational technology. Administrators were chosen based on their participation in curriculum development and technology planning. Demographic data indicated a diverse array of ages, educational backgrounds, and levels of AI-related experience, so guaranteeing the inclusion of several perspectives in the research outcomes.

Table 1.
Participant Demographics and Sampling Profile

Participant Type	Number	Age Range	Digital/AI Exposure	Experience Level
Students	100	12-18	Moderate	N/A
Teachers	60	25-52	Basic	≥ 2 years
School Administrators	18	30-55	Low	In curriculum/tech planning

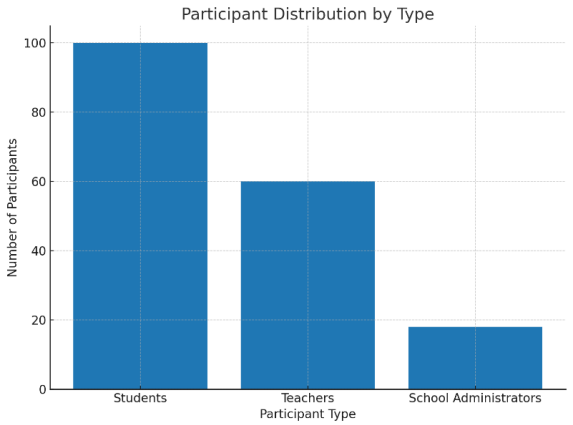


Figure 1. *Participant Distribution by Type*

Table 1 and Figure 1 provide a detailed summary of the participant demographics and sample characteristics. A total of 178 respondents were chosen using purposeful stratified sampling to guarantee diversity and contextual significance. The sample consisted of 100 students (56%) with modest exposure to AI, 60 teachers (34%) had a minimum of two years of teaching experience, and 18 administrators (10%) accountable for curriculum and technology integration. This equitable allocation ensures a learner-centered

approach while integrating perspectives from essential educational stakeholders. The demographic variety enhances the study's validity by triangulating viewpoints on AI's role in the construction of the ELT curriculum.

Instruments

The research utilized two principal devices to collect extensive data. The quantitative tool was a structured questionnaire of 25 items categorized into four domains: AI familiarity, pedagogical application, institutional support, and perceived hurdles. The questionnaire comprised 5-point Likert scale items, multiple-choice questions, and several open-ended prompts to elicit complex responses. The instrument was evaluated for validity by a team of four experts in educational technology, ELT, and AI integration. A preliminary test including 15 non-sample subjects yielded a Cronbach's Alpha score of 0.87, signifying robust internal consistency. The questionnaire was designed in accordance with the AI Literacy for Educators Framework and UNESCO's AI Competency Framework for Teachers.

A semi-structured interview guide was employed for the qualitative component to investigate participants' experiences, perceived obstacles, and practical recommendations about AI integration. The adaptable framework facilitated elaboration, enabling interviewees to candidly express their thoughts and concerns.

Data Collection Procedures

Data collection occurred in two consecutive phases. In Phase 1 (Quantitative), the structured questionnaire was disseminated to participants via both printed and digital versions to provide accessibility across various educational environments. On-site supervision was conducted during completion to address inquiries and guarantee response precision. A total of 178 valid replies were gathered, however 12 incomplete or invalid questionnaires were omitted from the study.

In Phase 2 (Qualitative), comprehensive semi-structured interviews were performed with 30 individuals chosen from a broader cohort, including educators, learners, and school administrators. Interviews ranged from 30 to 45 minutes and were performed either in person or by Zoom, contingent upon the participants' availability and location. To improve credibility and precision, member verification was utilized—interview transcripts were distributed to participants for validation. Furthermore, supplementary clarifications were requested when needed to eliminate ambiguities and guarantee that participant viewpoints were precisely reflected in the thematic analysis.

Data Analysis

The research utilized separate but complimentary analytical methods for quantitative and qualitative data. Descriptive statistics, including means, standard deviations, and frequency distributions, were computed to characterize participants' replies for the quantitative data. Correlation studies were conducted using SPSS version 27 to examine the correlations between variables. Results were systematically arranged and visually depicted using tables and charts to emphasize patterns and trends in AI familiarity, perceived advantages, and obstacles in English language instruction.

A thematic analysis technique was employed for the qualitative data utilizing NVivo 12 software. Data were carefully coded, categorized, and examined in accordance with Braun and Clarke's six-phase coding approach to uncover reoccurring patterns. Principal themes encompassed the perceived advantages of AI, obstacles to deployment, and the preparedness of educators for AI integration. To augment analytical rigor and ensure credibility, analyst triangulation was utilized, enabling various researchers to cross-verify data interpretation and mitigate potential bias during theme development and synthesis.

Trustworthiness and Ethical Considerations

To guarantee the reliability of the results, various methods were adopted to mitigate potential self-report bias. This involved data triangulation among various participant groups (students, teachers, and administrators) to ensure diverse perspectives; the protection of participant anonymity; and the employment of an interviewer independent of the participants' institutions to mitigate social desirability biases. The study upheld ethical integrity consistently. Informed permission was secured from all participants, who were apprised of the study's objectives, their voluntary involvement, and the right to withdraw at any moment without repercussions. Participants were notified about the anonymity of their responses. While particular ethics committee approval is not referenced, it is customary to obtain such approval from the institutional review board, such as the Universitas Negeri Makassar research ethics committee. All obtained data were securely stored and available solely to the research team, guaranteeing rigorous compliance with data protection and privacy regulations.

FINDINGS AND DISCUSSION

Quantitative Findings: Response Rate

During the quantitative phase of the study, 200 questionnaires were disseminated to participants from several secondary schools in South Sulawesi, encompassing students, English teachers, and school administrators. The distribution approach integrated both printed and digital versions to guarantee accessible for participants from various geographic and infrastructural backgrounds, encompassing rural and urban regions. The printed questionnaires were predominantly distributed in environments with restricted internet access, whereas the online version was provided to participants with dependable digital connectivity.

Of the 200 questionnaires given, 186 were returned, indicating a substantial initial return rate of 93%. Upon meticulous examination for thoroughness and precision, eight responses were deleted due to absent data, and four were discarded due to inconsistencies that

suggested a possible misinterpretation of essential information. This yielded a total of 178 valid and useable surveys, with an overall valid response rate of 89%.

The elevated response rate indicates robust participant involvement and interest in the subject, likely mirroring the increasing awareness of AI in education. It also furnished a comprehensive dataset for statistical analysis, guaranteeing that the conclusions were derived from a suitably big and representative sample for the study's objectives.

Table 2.

Questionnaire Distribution and Response Summary

Questionnaire Status	Number	Percentage (%)
Distributed	200	100
Returned	186	93
Valid Responses	178	89
Excluded (Incomplete)	8	4
Excluded (Inconsistent)	4	2

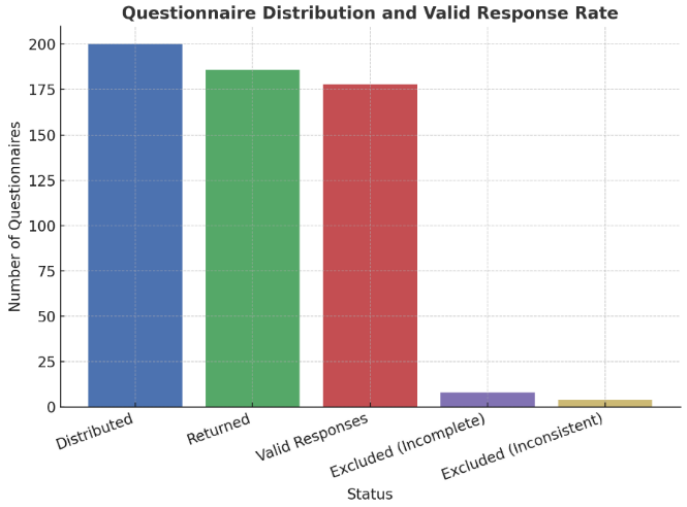


Figure 2. *Questionnaire Distribution and Valid Response Rate*

Table 2 and Figure 2 encapsulate the distribution of the questionnaire and the response procedure throughout the quantitative

phase. Out of 200 distributed surveys, 186 were returned (93%), and following screening, 178 valid responses (89%) were accepted. Twelve were omitted due of incompleteness or inconsistency. The visual depiction emphasizes negligible data loss and substantial participant participation. This stringent filtering technique guaranteed the dataset's authenticity and validity, demonstrating the researchers' meticulous data management. The strong response rate verifies that the data originate from a representative sample, establishing a reliable basis for further statistical analysis on AI integration in ELT curriculum development.

Quantitative Findings: Familiarity with AI Technologies

The study evaluated participants' self-reported knowledge of AI technologies within the framework of ELT. Familiarity levels were classified into three categories: Low, Moderate, and High. The findings reveal that 35% of participants indicated low familiarity, implying restricted exposure to or comprehension of AI applications in education. Forty-four percent constituted the biggest share, categorizing individuals as moderate, which signifies a general awareness of AI and some expertise with its tools, albeit not always inside formal pedagogical frameworks. Merely 21% of respondents classified themselves as having high familiarity, indicating they were proficient in utilizing AI technologies and possessed a comparatively advanced comprehension of their educational potential.

This distribution indicates that although stakeholder awareness of AI is increasing, most participants still function at a basic or intermediate level of proficiency. A substantial percentage with considerable familiarity indicates heightened exposure to AI via formal and informal channels, including online learning platforms, translation applications, and classroom technologies. Nonetheless, the comparatively low percentage of highly knowledgeable users underscores a deficiency in advanced AI literacy, especially among educators and administrators. Mitigating this deficiency through

focused training and professional development may improve AI's incorporation into ELT curriculum development.

Table 3.

Familiarity with AI Technologies

Familiarity Level	Number of Participants	Percentage (%)
Low	62	35
Moderate	78	44
High	38	21

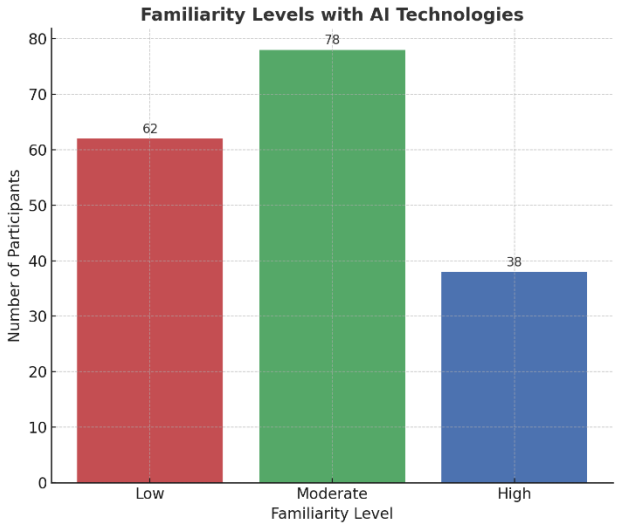


Figure 3. *Familiarity Levels with AI Technologies*

Table 3 and Figure 3 encapsulate participants' familiarity with AI technologies in **the** educational sector. Among 178 responders, 62 (35%) indicated low acquaintance, 78 (44%) moderate familiarity, and 38 (21%) high familiarity. The statistics indicate that the majority of participants have just a basic understanding, with a limited number exhibiting high skill. This pattern highlights the necessity for capacity-building activities to enhance AI literacy among educators, students, and administrators. The visual representation underscores the limited percentage of very confident users, emphasizing the necessity of professional growth and ongoing training programs to close the divide

between fundamental comprehension and proficient application of AI in English Language Teaching environments.

Quantitative Findings: Perceived Benefits of AI in ELT

Participants were requested to assess the prospective advantages of AI in ELT, concentrating on four principal domains: individualized learning, enhanced student engagement, delivery of fast feedback, and promotion of adaptive learning. The findings indicate that individualized learning was seen as the most substantial advantage, mentioned by 75% of participants. Participants emphasized AI's ability to customize training according to individual student requirements, tempo, and skill levels. Student involvement was ranked second, with 68% acknowledging AI's interactive and multimedia features as significant motivators for active learning.

Fifty-three percent of participants recognized the importance of immediate feedback, notably for its effectiveness in enabling pupils to promptly detect and rectify problems. Adaptive learning, in which AI modifies activities and materials according to learner progress, was recognized by 49% as a significant characteristic that facilitates ongoing enhancement.

This comparison ranking reveals that, although all four benefits are acknowledged, stakeholders prioritize AI's capacity to personalize the learning experience and sustain learner motivation. The diminished percentages for quick feedback and adaptive learning indicate that these elements may be less recognized or misused in contemporary practice, highlighting prospects for enhanced adoption and incorporation into ELT courses.

Table 4.

Perceived Benefits of AI in ELT

Perceived Benefit	Number of Participants	Percentage (%)
Personalized Learning	134	75
Increased Engagement	121	68
Immediate Feedback	95	53

Adaptive Learning	88	49

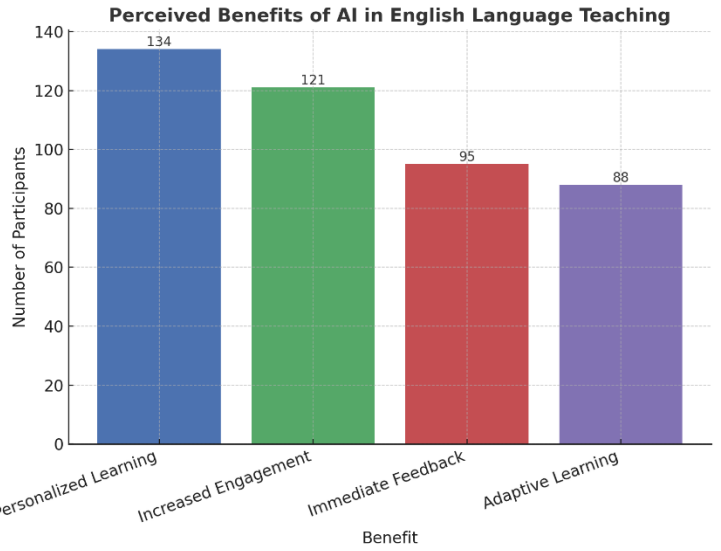


Figure 4. *Perceived Benefits of AI in English Language Teaching*

Table 4 and Figure 4 illustrate participants' perspectives regarding the benefits of AI in ELT. Personalized learning was identified as the primary advantage (75%), succeeded by heightened engagement (68%), prompt feedback (53%), and adaptable learning (49%). These findings demonstrate that stakeholders greatly appreciate AI's capacity to customize training, inspire learners, and deliver immediate feedback. Despite being less highlighted, adaptive learning and feedback are essential elements of AI-enhanced education. The overarching trend emphasizes AI's revolutionary function in facilitating personalized, student-centric instruction via interactive and adaptive learning environments, underscoring its significant potential for improving ELT curriculum creation and classroom efficacy.

Quantitative Findings: Perceived Challenges in AI Integration

Participants recognized multiple significant obstacles that impede the successful incorporation of AI into ELT curriculum. The predominant obstacle identified was insufficient teacher training, as expressed by 124 individuals (70%). Numerous educators recognized their constrained exposure to AI tools and inadequate professional development opportunities, which hindered their capacity to effectively integrate AI into classroom practices.

The second most prevalent obstacle was restricted resources and access to technology, cited by 116 participants (65%). This encompasses deficient infrastructure, including unstable internet connectivity, obsolete equipment, and limited access to licensed AI-driven teaching platforms.

Ninety participants (51%) expressed limited acquaintance with AI technologies, indicating a deficiency in both comprehension and practical application of AI in education. Resistance to change surfaced as a difficulty for 75 participants (42%), frequently associated with apprehensions around workload, skepticism about AI's efficacy, or a preference for conventional teaching techniques. The findings indicate that although stakeholders acknowledge AI's promise, substantial structural and attitudinal hurdles persist. Resolving these challenges through focused teacher training, infrastructure investment, and awareness initiatives will be crucial for optimizing AI's role in ELT curriculum development and guaranteeing sustainable implementation.

Table 5.

Perceived Challenges in AI Integration

Perceived Challenge	Number of Participants	Percentage (%)
Lack of Teacher Training	124	70
Limited Resources/Access	116	65
Low Familiarity with AI Tools	90	51
Resistance to Change	75	42

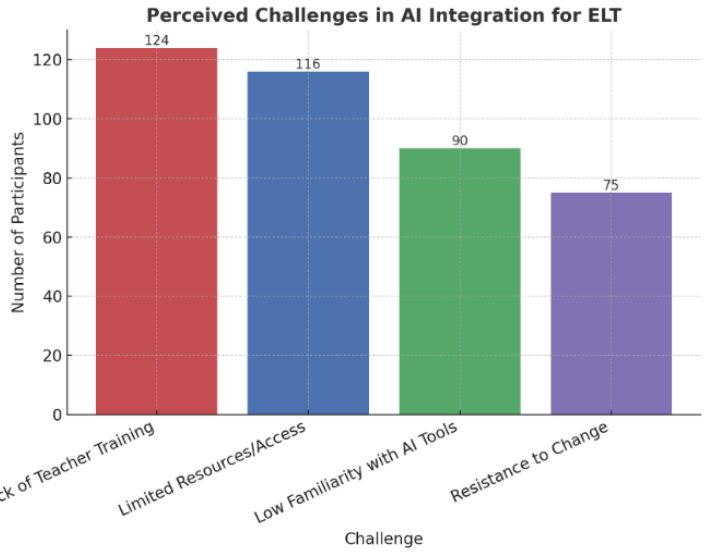


Figure 5. *Perceived Challenges in AI Integration for ELT*

Table 5 and Figure 5 encapsulate the primary obstacles associated with the integration of AI into ELT. The predominant issue was inadequate teacher preparation (70%), succeeded by restricted resources and technology access (65%). Low acquaintance with AI (51%) and aversion to change (42%) were also documented. The illustration indicates that systemic impediments—especially training and infrastructure—supersede individual attitudinal elements. The results highlight the necessity for systemic solutions, including ongoing professional development, investment in technological infrastructure, and policies that enhance educators' confidence and ability to effectively incorporate AI into curriculum design and pedagogical practices in ELT contexts.

Quantitative Findings: Correlation Analysis

The research investigated the correlation between participants' acquaintance with AI technology and their perceptions of AI's advantages in ELT. Employing Pearson's correlation analysis in SPSS v27, the results demonstrated a positive and statistically significant link between familiarity levels and perceived advantages ($p < 0.01$).

Participants with less experience had a mean perceived benefit score of 2.5 ± 0.8, indicating a restricted acknowledgment of AI's potential. Individuals with considerable acquaintance achieved higher scores (3.6 ± 0.9), suggesting an acknowledgment of certain advantages of AI despite lacking full proficiency. The high familiarity group achieved the highest mean score (4.2 ± 0.7), indicating robust confidence in AI's ability to improve English Language Teaching via individualized learning, heightened engagement, and adaptive instruction.

This tendency indicates that as knowledge with AI grows, the acknowledgment of its educational significance also increases. The statistical significance of the findings highlights the necessity of fostering AI literacy among educators, learners, and administrators. Enhancing familiarity via focused professional development, practical training, and exposure to real-world AI applications may consequently foster increased acceptance and incorporation of AI tools in ELT curriculum development, ultimately elevating instructional quality and student learning outcomes.

Table 6.

Correlation Between Familiarity and Perceived Benefits

Familiarity Level	Mean Perceived Benefit Score	Standard Deviation
Low	2.5	0.8
Moderate	3.6	0.9
High	4.2	0.7

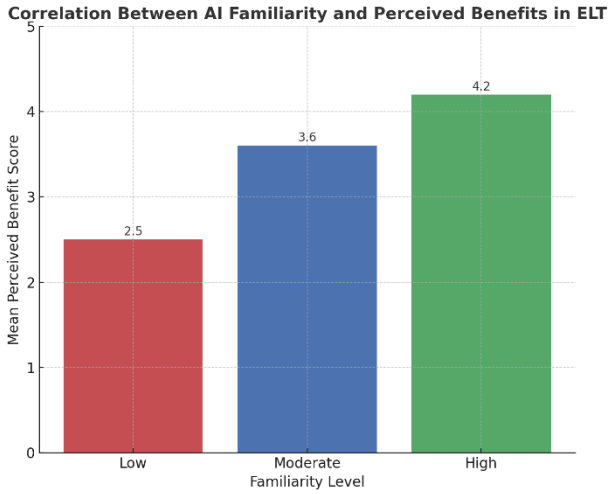


Figure 6. *Correlation between AI Familiarity and Perceived Benefits in ELT*

Table 6 and Figure 6 illustrate the relationship between knowledge with AI and perceived advantages in ELT. Participants with little familiarity scored 2.5, those with moderate familiarity scored 3.6, and those with high familiarity scored 4.2, demonstrating a statistically significant positive connection ($p < 0.01$). With heightened familiarity, the acknowledgment of AI's educational significance also escalates. The image visually corroborates this rising trend, emphasizing that enhanced AI literacy cultivates a deeper appreciation of its educational advantages. These findings underscore the necessity of focused professional development and ongoing training to improve the AI proficiency of educators and students, hence facilitating broader and more successful incorporation of AI in ELT curriculum development.

Qualitative Findings: Emerging Themes

The qualitative research identified several significant topics concerning the utilization of AI tools in ELT. Participants delineated a range of AI applications presently employed, encompassing intelligent teaching systems, language acquisition tools (e.g., for vocabulary and pronunciation enhancement), and AI-driven writing aides that offer grammatical and stylistic corrections. These technologies were

regarded as beneficial for providing tailored learning experiences, allowing students to advance at their own speed and concentrate on particular areas of enhancement.

Both students and educators reported favorable experiences with the integration of AI. Students said that interactive features, gamification components, and immediate feedback enhanced the engagement and enjoyment of the learning experience. Educators emphasized AI's ability to automate monotonous chores, such as grading and creating practice exercises, thus liberating time for more substantive instructional engagements. An instructor observed that AI-assisted platforms "facilitated a more effective connection between theory and practice," particularly in writing and speaking tasks.

Notwithstanding infrastructural and training constraints, the prevailing feeling was hopeful, with numerous participants indicating a desire to enhance AI's integration within their classes. These findings indicate that, when well supported, AI tools can improve both the instructional process and student motivation, hence positively influencing ELT curriculum creation.

Table 7.
Emerging Themes from Qualitative Findings

Emerging Theme	Frequency (Mentions)
Use of AI Tutoring Systems	22
Language Learning Apps	26
AI-Powered Writing Assistants	18
Positive Learner Experiences	30
Positive Teacher Experiences	25

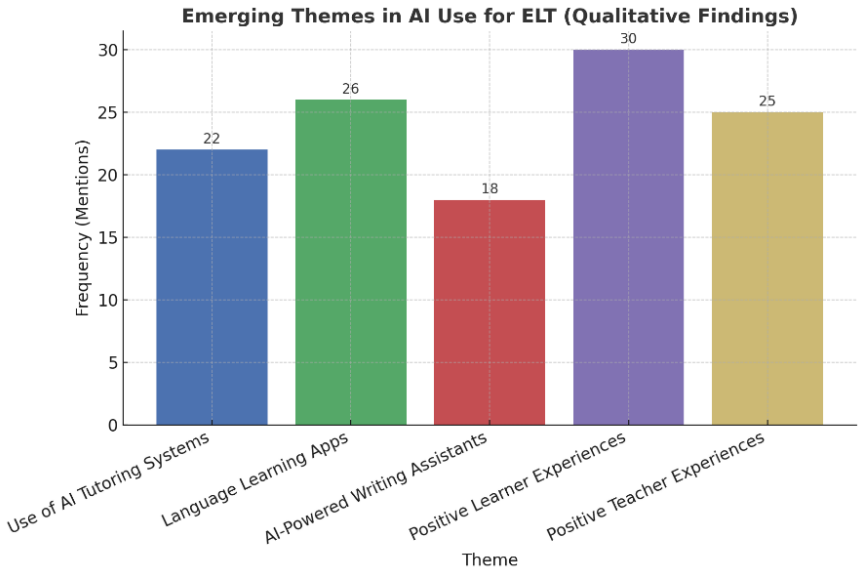


Figure 7. *Emerging Themes in AI Use for ELT (Qualitative Findings)*

Table 7 and Figure 7 illustrate the primary qualitative topics of participants' experiences using AI in ELT. The most commonly referenced topics were positive student experiences (30) and language learning apps (26), followed by positive instructor experiences (25), AI tutoring systems (22), and AI-powered writing assistance (18). The results indicate significant engagement and happiness among users, demonstrating that both students and teachers regard AI as advantageous for individualized learning, enhancement of writing skills, and instructional efficacy. The findings indicate that the integration of AI in ELT improves teaching quality, increases learner motivation, and fosters interaction, transcending simple technology adoption.

Qualitative Findings: Perceptions of Educators and Administrators

The qualitative findings indicated a complex viewpoint among educators and administrators over the use of AI into ELT courses. There was a palpable enthusiasm regarding AI's capacity to revolutionize teaching methodologies, augment student involvement, and optimize administrative functions. Numerous educators conveyed

optimism regarding AI's capacity to deliver tailored learning experiences and facilitate differentiated instruction, whilst administrators perceived it as a chance to upgrade the curriculum and match with global educational trends.

Nevertheless, this enthusiasm was mitigated by a significant deficiency in preparedness. Both groups saw inadequate professional development opportunities as a significant obstacle, with numerous educators missing the technical competencies and pedagogical methodologies required to utilize AI tools effectively. Administrators highlighted the challenge of constrained resources and the difficulties in obtaining sustainable infrastructure, including high-speed internet, modern gadgets, and dependable AI-powered platforms.

Concerns regarding equality have arisen, as rural schools frequently have more significant technical and training deficiencies compared to their metropolitan counterparts. One administrator remarked, "We recognize the potential, but without adequate investment in training and resources, AI will remain underexploited." These findings highlight the necessity for tailored, context-specific assistance to reconcile the disparity between AI's potential and its practical application in ELT.

Table 8.

Perceptions of Educators and Administrators

Perception Theme	Frequency (Mentions)
Enthusiasm about AI Potential	28
Lack of Preparedness	24
Need for Teacher Training	26
Infrastructure Limitations	22
Equity Concerns (Rural vs Urban)	18

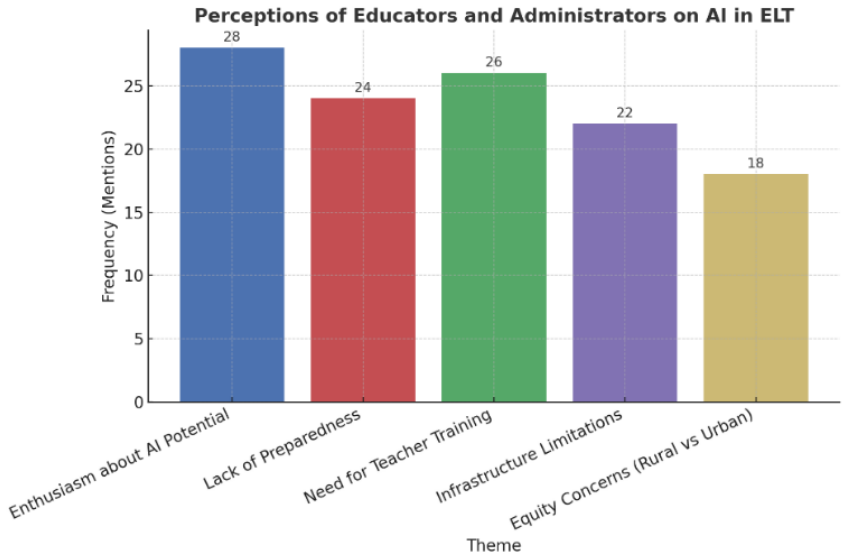


Figure 8. *Perceptions of Educators and Administrators on AI in ELT*

Table 8 and Figure 8 encapsulate the perspectives of educators and administrators regarding the integration of AI in ELT. The predominant topic was optimism regarding AI's potential (28), succeeded by the necessity for teacher training (26) and insufficient preparedness (24). Infrastructure constraints (22) and equity issues (18) were also significant. This balanced pattern demonstrates enthusiasm for AI's transformational promise while acknowledging practical limitations. The figure emphasizes that sustainable implementation necessitates tackling both human and infrastructural obstacles via capacity-building programs, professional development, and fair access to technology—particularly in rural regions—to guarantee inclusive and successful AI integration in ELT.

Qualitative Findings: Recommendations from Participants

Participants provided several pragmatic suggestions to improve the effective incorporation of AI into ELT courses. A persistent recommendation was the necessity for extensive professional development programs specifically designed for AI uses in language education. Educators and administrators underscored the necessity for

training to extend beyond fundamental tool presentations, integrating practical workshops, exemplary lesson designs, and methodologies for adopting AI tools into current curricula. Ongoing learning activities, like peer mentoring and online professional learning groups, were suggested to maintain skill improvement over time.

A further essential proposal was to guarantee dependable access to resources and ongoing support. This encompasses investing in modern gear, reliable internet connections, and memberships to educational AI platforms. Participants emphasized the necessity of accessible technical help to resolve issues and facilitate seamless classroom integration. They emphasized the necessity of fostering a supportive climate that enables educators to experiment with AI tools without the apprehension of failure, hence promoting innovation and collaboration.

These proposals emphasize that the integration of AI in English Language Teaching should be regarded as a protracted endeavor. Success hinges on the integration of technical investments with ongoing professional development, empowering educators to maximize AI's promise in enhancing teaching quality and improving student learning outcomes.

Table 9.

Recommendations from Participants

Recommendation Theme	Frequency (Mentions)
Professional Development Programs	30
Hands-on Workshops & Lesson Design	26
Peer Mentoring & Learning Communities	22
Access to Updated Hardware/Internet	28
Subscription to AI Educational Platforms	20
Continuous Technical Support	24
Supportive Environment for Innovation	18

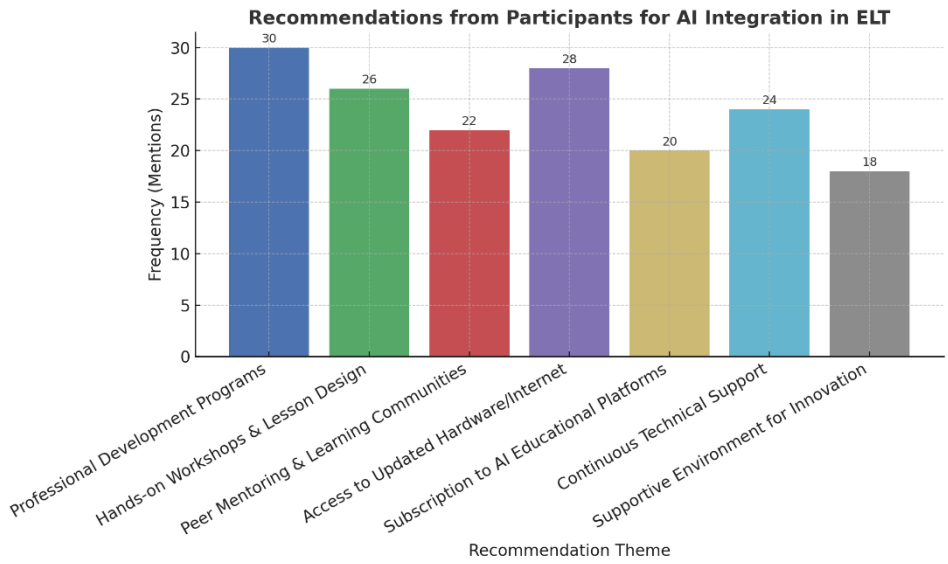


Figure 9. *Recommendations from Participants for AI Integration in ELT*

Table 9 and Figure 9 illustrate participants' suggestions for improving AI integration in ELT. The primary requirement identified was professional development programs (30), succeeded by access to updated gear and dependable internet (28), and practical workshops for lesson design (26). Ongoing technical support (24) and peer mentoring (22) were deemed essential for sustainable implementation. Despite a lower number of participants citing AI platform subscriptions (20) and innovation promotion (18), these elements are still essential. The findings indicate that effective AI adoption necessitates a harmonious integration of strong infrastructure, continuous training, and conducive professional contexts for educators.

DISCUSSION

Interpretation of Findings

The results of this study closely correspond with international literature regarding the incorporation of AI in ELT, while also emphasizing distinct regional characteristics. Consistent with (Chan &

Lee, 2023), this study corroborates that stakeholders predominantly regard AI as a valuable instrument for augmenting individualized learning and elevating student engagement. The robust association between familiarity with AI and perceived advantages aligns with the findings of (Ali, 2025; Alias & Razak, 2025; Asrifan et al., 2025), who discovered that increased exposure to AI technology fosters more positive perceptions of their educational worth. AI's ability to deliver adaptive learning and immediate feedback is seen as a transformational benefit in both global and local contexts.

Nonetheless, the analysis also uncovers deviations from established norms in high-resource environments. In contrast to studies performed in technologically advanced nations, schools in South Sulawesi encounter enduring infrastructural deficiencies, such as inconsistent internet connectivity, antiquated technology, and restricted access to licensed AI platforms. The absence of organized professional development programs for educators impedes effective adoption, indicating that without specific interventions, AI integration may remain superficial.

Cultural and policy determinants also affect AI adoption in the region. The collectivist mentality and centralized educational policy framework indicate that widespread implementation frequently relies on top-down mandates rather than individual school initiatives. Furthermore, rural-urban differences intensify inequities in access to technology and training, resulting in unequal possibilities for AI-enhanced education.

These findings emphasize that although the educational potential of AI in ELT aligns with global research, its effective implementation in South Sulawesi necessitates customized tactics. Mitigating infrastructural deficiencies, enhancing teacher development, and guaranteeing equal access will be crucial to reconcile the disparity between AI's potential and its tangible effects. This context-specific methodology is essential for actualizing AI's transformative impact on regional ELT curriculum development.

Addressing the Knowledge Gap

This work fills a critical knowledge void by offering empirical evidence on the utilization of AI to enhance ELT curriculum creation in a developing regional environment. Conventional English Language Teaching curriculum in South Sulawesi, similar to many regions in Indonesia, frequently employ a rigid, textbook-centric methodology that fails to address unique learning requirements, differing competence levels, and varying learning tempos. AI provides effective remedies for these deficiencies via customized learning trajectories, instantaneous performance monitoring, and tailored material dissemination. These features allow educators to customize education more accurately, guaranteeing that both advanced and struggling students have suitable assistance (Murtaza et al., 2022; Strielkowski et al., 2025).

An AI analytics-driven curriculum, guided by data, may perpetually adapt according to trends in student performance. This enables educators to promptly identify skill deficiencies, adjust course sequences, and include additional resources in response to evolving need. Adaptive curriculum design guarantees that education is pertinent, stimulating, and congruent with intended language proficiency objectives.

Nonetheless, realizing this transition necessitates confronting significant obstacles. Specialized teacher training is crucial for enhancing educators' AI literacy, allowing them to include AI technologies as fundamental elements of teaching rather than mere supplements (Ciampa et al., 2025; Dai, 2025). Professional development must emphasize both technological competencies and pedagogical methodologies for AI-enhanced training.

Institutional preparedness is equally essential. Educational institutions must allocate resources towards infrastructure—dependable internet connectivity, modern technology, and access to licensed AI platforms—to facilitate sustainable adoption. Furthermore, resource distribution must favor underprivileged rural schools to address equity disparities.

Integrating AI's adaptable capabilities with a comprehensive support system for educators and institutions can transform ELT curriculum from inflexible, uniform models to dynamic, data-driven frameworks (Kayyali, 2025; Mavidi, 2025; Owais, 2025). This would not only improve language learning results but also align South Sulawesi's education system with global advancements in language instruction.

Theoretical and Policy Implications

This work theoretically enhances the expanding corpus of AI-in-Education research by concentrating on a neglected geographical and socio-economic context—South Sulawesi, Indonesia. A significant portion of the current work on AI in ELT derives from technologically advanced or urban contexts, resulting in a limited comprehension of AI's functionality in resource-constrained locations. This study used a mixed-methods strategy, yielding quantitative evidence of relationships between AI knowledge and reported benefits, while also delivering in-depth qualitative insights into the experiences of instructors, students, and administrators. This amalgamation enhances the credibility of results and expands the breadth of AI curriculum investigation.

The findings highlight the imperative of incorporating AI-readiness into national and regional educational policies. A primary recommendation is the creation of professional development frameworks that encompass both technical skills and pedagogical applications of AI in ELT. Such frameworks must encompass modular training, mentorship initiatives, and ongoing learning opportunities customized for varying degrees of digital literacy.

The incorporation of AI competency criteria into the national curricular policy is equally significant. This would guarantee that AI literacy is regarded as an essential competency rather than an optional skill for both educators and learners. Policymakers must also contemplate standards for the ethical utilization of AI, ensuring that its implementation fosters inclusivity, data privacy, and equitable access in both urban and rural settings.

Integrating AI pedagogy with formal policy frameworks enables the education system to progress from isolated pilot initiatives to sustainable, comprehensive adoption. This approach regards AI not only as a technological advancement but as an integral element of curriculum development, promoting sustained enhancements in the quality of ELT while contributing to the worldwide dialogue on equitable and contextually relevant AI integration in education.

Future Research Directions

The results of this study present numerous intriguing opportunities for future research on the integration of AI in the construction of ELT curricula. An essential focus is the execution of longitudinal research to assess AI's enduring influence on pedagogical methods, student results, and curricular transformation over prolonged durations. This research would ascertain whether the initial enthusiasm and perceived advantages of AI persist as educators and institutions acclimate to its implementation.

A significant domain is comparative analysis across regions or nations. By comparing experiences in South Sulawesi with those in other Indonesian provinces or countries with analogous socio-economic characteristics, researchers could discern shared problems and effective techniques for AI implementation in resource-limited environments. These comparisons would enhance the worldwide comprehension of AI's adaptation to various educational contexts and cultural frameworks.

Moreover, focused assessments of certain AI tools and platforms employed in language acquisition could yield more detailed information regarding their efficacy. Examining the effects of AI-driven writing assistants, adaptive vocabulary applications, or intelligent tutoring systems on particular language competencies would inform educators and policymakers in choosing suitable technology.

Integrating mixed-methods techniques in these studies—merging statistical analyses with qualitative narratives—would

provide a comprehensive perspective on AI's involvement in ELT. This research would enhance the evidence base for AI-enhanced curricula and guide the development of context-sensitive models that reconcile technological potential with pedagogical and infrastructural realities, ensuring sustainable and equitable implementation across diverse learning environments.

CONCLUSION

This study investigated the use of AI in enhancing curriculum creation for ELT in secondary schools in South Sulawesi. The results indicate that although knowledge of AI tools is increasing among students, instructors, and administrators, successful application is obstructed by inadequate training and restricted technological infrastructure. Nonetheless, AI is broadly acknowledged for its capacity to provide customized learning experiences, immediate feedback, and adaptable instructional assistance.

These findings indicate that language educators should transcend conventional pedagogical frameworks by incorporating AI-enhanced tools—such as intelligent tutoring systems, writing helpers, and speech recognition software—into lesson design and classroom activities. Curriculum designers are urged to embrace a more adaptable, data-driven methodology that matches AI applications with explicitly stated learning objectives and contextual learner requirements.

To facilitate this shift, educational institutions and authorities must allocate resources towards specialized professional development that enhances teachers' AI competences and pedagogical integration abilities. Moreover, curriculum frameworks must be updated to explicitly incorporate AI-driven instructional methodologies, assuring consistency with 21st-century educational objectives.

Future study should investigate the longitudinal effects of AI integration in ELT curricula, analyzing how the continuous usage of AI technologies influences student language competency, instructor

methodologies, and overall curriculum efficacy over time. Cross-regional comparative analyses and experimental methodologies could enhance our comprehension of AI's transformative impact in various educational contexts.

DECLARATION OF AI AND AI-ASSISTED TECHNOLOGIES

The authors declare that Chat-GPT (v4.0.2024.12) Artificial Intelligence was used exclusively for obtaining research resources and proofreading purposes during the preparation of this manuscript. This AI-assisted technology was employed to enhance language clarity and readability. The authors have carefully reviewed and edited the content to ensure its accuracy and quality, take full responsibility for the final version of the publication.

REFERENCES

Alalawi, K., Athauda, R., & Chiong, R. (2024). An extended learning analytics framework integrating machine learning and pedagogical approaches for student performance prediction and intervention. *International Journal of Artificial Intelligence in Education*. https://doi.org/10.1007/s40593-024-00429-7

Alam, A., & Mohanty, A. (2023). Educational technology: Exploring the convergence of technology and pedagogy through mobility, interactivity, AI, and learning tools. *Cogent Engineering*, *10*(2). https://doi.org/10.1080/23311916.2023.2283282

Ali, R. (2025). How challenging? Barriers for teachers in institutional implementation of blended learning. *Open Learning: The Journal of Open, Distance and e-Learning*, *40*(3), 324–341. https://doi.org/10.1080/02680513.2024.2342922

Alias, N. F., & Razak, R. A. (2025). Revolutionizing learning in the digital age: A systematic literature review of microlearning strategies. *Interactive Learning Environments*, *33*(1), 1–21. https://doi.org/10.1080/10494820.2024.2331638

Al-khresheh, M. H. (2024). The role of presentation-based activities in enhancing speaking proficiency among Saudi EFL students: A quasi-experimental study. *Acta Psychologica*, *243*, 104159. https://doi.org/10.1016/j.actpsy.2024.104159

Amoako, K., Asante, A., & Owusu, K. (2024). AI-powered tools for personalized learning in educational technology. *International Journal of Technology and Modeling*, *3*(1), 46–56. https://doi.org/10.63876/ijtm.v3i1.115

Asrifan, A., Wajdi, F., Ishak, S., & Alwi, A. (2025). Humanizing the digital classroom. In *Blending Human Intelligence with Technology in the Classroom* (pp. 87–118). IGI Global. https://doi.org/10.4018/979-8-3373-0771-8.ch005

Bachtiar, B. (2025). Preparing Citizens for the Future of Digital Literacy and AI. In *Digital Citizenship and the Future of AI Engagement, Ethics, and Privacy* (pp. 405–440). IGI Global. https://doi.org/10.4018/979-8-3693-9015-3.ch015

Baker, M. A. (2021). Educational distancing: A mixed-methods study of student perceptions in the time of Coronavirus. *Journal of Hospitality & Tourism Education*, *33*(3), 207–221. https://doi.org/10.1080/10963758.2021.1907194

Caglar, A. E., Avci, S. B., Daştan, M., & Destek, M. A. (2024). Investigation of the effect of natural resource dependence on environmental sustainability under the novel load capacity curve hypothesis. *International Journal of Sustainable Development & World Ecology*, *31*(4), 431–446. https://doi.org/10.1080/13504509.2023.2296495

Chan, C. K. Y., & Lee, K. K. W. (2023). The AI generation gap: Are Gen Z students more interested in adopting generative AI such as ChatGPT in teaching and learning than their Gen X and millennial generation teachers? *Smart Learning Environments*, *10*(1), 60. https://doi.org/10.1186/s40561-023-00269-3

Ciampa, K., Wolfe, Z., & Hensley, M. (2025). From entry to transformation: Exploring AI integration in teachers' K–12

assessment practices. *Technology, Pedagogy and Education*, *34*(2), 141–160. https://doi.org/10.1080/1475939X.2024.2413378

Dai, Y. (2025). Integrating unplugged and plugged activities for holistic AI education: An embodied constructionist pedagogical approach. *Education and Information Technologies*, *30*(5), 6741–6764. https://doi.org/10.1007/s10639-024-13043-w

Ejaz, H., McGrath, H., Wong, B. L., Guise, A., Vercauteren, T., & Shapey, J. (2022). Artificial intelligence and medical education: A global mixed-methods study of medical students' perspectives. *DIGITAL HEALTH*, *8*, 205520762210890. https://doi.org/10.1177/20552076221089099

Giri, A. (2024). *Revolutionizing Student Evaluation* (pp. 333–362). https://doi.org/10.4018/979-8-3693-6170-2.ch012

Halkiopoulos, C., & Gkintoni, E. (2024). Leveraging AI in E-learning: Personalized learning and adaptive assessment through cognitive neuropsychology—a systematic analysis. *Electronics*, *13*(18), 3762. https://doi.org/10.3390/electronics13183762

Hasibuan, O. P., Tjakraatmadja, J. H., & Sunitiyoso, Y. (2022). Illegal gold mining in Indonesia: Structure and causes. *International Journal of Emerging Markets*, *17*(1), 177–197. https://doi.org/10.1108/IJOEM-11-2019-0964

Hooda, A., Gupta, P., Jeyaraj, A., Giannakis, M., & Dwivedi, Y. K. (2022). The effects of trust on behavioral intention and use behavior within e-government contexts. *International Journal of Information Management*, *67*, 102553. https://doi.org/10.1016/j.ijinfomgt.2022.102553

Huang, M. (2025). Student engagement and speaking performance in AI-assisted learning environments: A mixed-methods study from Chinese middle schools. *Education and Information Technologies*, *30*(6), 7143–7165. https://doi.org/10.1007/s10639-024-12989-1

Huang, W., Hew, K. F., & Fryer, L. K. (2022). Chatbots for language learning—Are they really useful? A systematic review of chatbot-supported language learning. *Journal of Computer*

Assisted Learning, *38*(1), 237–257. https://doi.org/10.1111/jcal.12610

Javed, F. (2024). *Preparing for Tomorrow* (pp. 43–78). https://doi.org/10.4018/979-8-3373-1692-5.ch003

Kayyali, M. (2025). Ethical considerations in higher education. In *Accountability in Higher Education* (pp. 145–184). IGI Global. https://doi.org/10.4018/979-8-3693-7708-6.ch006

Liando, N. V. F., & Tatipang, D. P. (2022). English or Indonesian language? Parents' perception toward children's second language learning context. *Jurnal Lingua Idea*, *13*(1), 61. https://doi.org/10.20884/1.jli.2022.13.1.5749

Mavidi, P. N. (2025). *Fluency Reimagined* (pp. 253–292). https://doi.org/10.4018/979-8-3693-9077-1.ch011

Meegammana, N. W., & Fernando, H. (2025). AI-driven adaptive security for sensor networks: Next-generation firewalls for attack detection. *International Journal of Distributed Sensor Networks*, *2025*(1). https://doi.org/10.1155/dsn/5973480

Mikeladze, T., Meijer, P. C., & Verhoeff, R. P. (2024). A comprehensive exploration of artificial intelligence competence frameworks for educators: A critical review. *European Journal of Education*, *59*(3). https://doi.org/10.1111/ejed.12663

Mulkiyah, U. (2024). Integrating artificial intelligence in EFL classrooms: Opportunities and challenges for Indonesian teachers. *Journal Corner of Education, Linguistics, and Literature*, *4*(001), 765–773. https://doi.org/10.54012/jcell.v4i001.507

Murtaza, M., Ahmed, Y., Shamsi, J. A., Sherwani, F., & Usman, M. (2022). AI-based personalized e-learning systems: Issues, challenges, and solutions. *IEEE Access*, *10*, 81323–81342. https://doi.org/10.1109/ACCESS.2022.3193938

Mutawa, A. M., & Sruthi, S. (2024). *UNESCO's AI Competency Framework* (pp. 75–96). https://doi.org/10.4018/979-8-3693-0884-4.ch004

Mwogosi, A., Mambile, C., Kibinda, N., & Shao, D. (2025). Blockchain and AI in Tanzanian EHR systems: Perceptions, challenges, and

solutions. *Journal of Systems and Information Technology*. https://doi.org/10.1108/JSIT-10-2024-0377

Ndiangui, P., Mwangi, F. K., & Zhang, J. (2025). Enhancing student skills through the integration of online learning in Kenya's Competency-Based Curriculum (CBC). *Research in Social Sciences and Technology*, *10*(2), 1–35. https://doi.org/10.46303/ressat.2025.25

Nigar, N., Kostogriz, A., Mhilli, O., & Yu, X. (2024). Curriculum as 'folding' democratic practice: Integrating Deleuzian and Deweyan philosophies with the lived experiences of English teachers. *Curriculum Perspectives*, *44*(4), 411–424. https://doi.org/10.1007/s41297-024-00258-7

Okada, A., Sherborne, T., Panselinas, G., & Kolionis, G. (2025). Fostering transversal skills through open schooling supported by the CARE-KNOW-DO pedagogical model and the UNESCO AI competencies framework. *International Journal of Artificial Intelligence in Education*. https://doi.org/10.1007/s40593-025-00458-w

Ouyang, F., & Jiao, P. (2021). Artificial intelligence in education: The three paradigms. *Computers and Education: Artificial Intelligence*, *2*, 100020. https://doi.org/10.1016/j.caeai.2021.100020

Owais, A. K. (2025). AI in English teaching with Chat-GPT: Does it really work?. In *Using AI Tools in Text Analysis, Simplification, Classification, and Synthesis* (pp. 199-228). IGI Global Scientific Publishing.

Parker, M. A., Walser, T. M., & Dighe, S. (2024). Academic program development: A collaborative and context-sensitive approach. *Discover Education*, *3*(1), 272. https://doi.org/10.1007/s44217-024-00377-3

Pesqueira, A., Sousa, M. J., & Pereira, R. (2025). Individual dynamic capabilities and artificial intelligence in health operations: Exploration of innovation diffusion. *Intelligence-Based Medicine*, *11*, 100239. https://doi.org/10.1016/j.ibmed.2025.100239

Pinkan Septiani, R., Indra Nugraha, S., & Karlina Ambarwati, E. (2025). Exploring AI-driven language teaching for English as a foreign language teacher in vocational high school in Karawang. *Journal of Educational Sciences*, *9*(4), 2073–2084. https://doi.org/10.31258/jes.9.4.p.2073-2084

Plotzky, C., Loessl, B., Kuhnert, B., Friedrich, N., Kugler, C., König, P., & Kunze, C. (2023). My hands are running away – learning a complex nursing skill via virtual reality simulation: A randomized mixed methods study. *BMC Nursing*, *22*(1), 222. https://doi.org/10.1186/s12912-023-01384-9

Praja Dinata, R., Suryati, N., Kholilurrahman Jailani, M., Paulus Keli, Y., Rovikasari, M., & Hasymi, M. (2025). Exploring rural EFL lecturers' perspectives on the integration of Artificial Intelligence (AI) in foreign language pedagogy. *LEARN Journal: Language Education and Acquisition Research Network*, *18*(2), 633–654. https://doi.org/10.70730/OVMA8060

Purushothaman, R., Alamelu, R., Selvabaskar, S., & Sudha, M. (2025). Theories, techniques and strategies of sustainable circular economy: A systematic literature review. *Discover Sustainability*, *6*(1), 297. https://doi.org/10.1007/s43621-025-01161-5

Rhamadina, W. (2025). The analysis of readability level of reading text in an English textbook entitled "SPLASH" (smart path to learning English). *Presented to the Faculty of Educational Sciences in Partial Fulfillment of the Requirements for Master Degree at Graduate Program of English Education*. THESIS - Institutional Repository UIN Syarif Hidayatullah Jakarta

Schiff, D. (2022). Education for AI, not AI for education: The role of education and ethics in national AI policy strategies. *International Journal of Artificial Intelligence in Education*, *32*(3), 527–563. https://doi.org/10.1007/s40593-021-00270-2

Schmid, R., Pauli, C., Stebler, R., Reusser, K., & Petko, D. (2022). Implementation of technology-supported personalized learning—its impact on instructional quality. *The Journal of*

Educational Research, *115*(3), 187–198. https://doi.org/10.1080/00220671.2022.2089086

Shanmugavelu, G., Parasuraman, B., Ariffin, K., Kannan, B., & Vadivelu, M. (2020). Inquiry method in the teaching and learning process. *Shanlax International Journal of Education*, *8*(3), 6–9. https://doi.org/10.34293/education.v8i3.2396

Shen, P., & Chen, Y. (2025). Customer-oriented strategy and AI social responsibility performance: A resource-based view. *The Service Industries Journal*, 1–33. https://doi.org/10.1080/02642069.2025.2512781

Southworth, J., Migliaccio, K., Glover, J., Glover, J., Reed, D., McCarty, C., Brendemuhl, J., & Thomas, A. (2023). Developing a model for AI Across the curriculum: Transforming the higher education landscape via innovation in AI literacy. *Computers and Education: Artificial Intelligence*, *4*, 100127. https://doi.org/10.1016/j.caeai.2023.100127

Strielkowski, W., Grebennikova, V., Lisovskiy, A., Rakhimova, G., & Vasileva, T. (2025). AI-driven adaptive learning for sustainable educational transformation. *Sustainable Development*, *33*(2), 1921–1947. https://doi.org/10.1002/sd.3221

Suharno, S., Musthafa, B., & Purnawarman, P. (2025). Exploring perceptions and experiences: Integrating AI in English language teaching from the perspectives of learners and educators. *Jurnal Pendidikan Progresif*, *15*(1), 499–515. https://doi.org/10.23960/jpp.v15i1.pp499-515

Sulistyaningrum, S., & Shopia, K. (2024). Incorporating an ICT-competency framework and problem-solving skills as twenty-first century skills in practical key teaching syllabuses. *The International Journal of Technologies in Learning*, *32*(1), 23–49. https://doi.org/10.18848/2327-0144/CGP/v32i01/23-49

Tan, A.-L., Ong, Y. S., Ng, Y. S., & Tan, J. H. J. (2023). STEM problem solving: Inquiry, concepts, and reasoning. *Science & Education*, *32*(2), 381–397. https://doi.org/10.1007/s11191-021-00310-2

Tan, L. Y., Hu, S., Yeo, D. J., & Cheong, K. H. (2025). Artificial intelligence-enabled adaptive learning platforms: A review. *Computers and Education: Artificial Intelligence*, *9*, 100429. https://doi.org/10.1016/j.caeai.2025.100429

Ulfatuz, N., Maro, Z., Mujiyanto, J., & Astuti, P. (2025). *IDEAS Journal of Language Teaching and Learning, Linguistics and Literature Examining the Impact of Emancipated Curriculum on EFL Teachers' Creativity in Lesson Planning and Teaching Practice at Vocational High School, Semarang Regency, Central Java*. *13*(2), 3269–3279. https://doi.org/10.24256/ideas

Zhou, H. (2025). Exploring the dynamic teaching-learning relationship in interactive learning environments. *Interactive Learning Environments*, 1–31. https://doi.org/10.1080/10494820.2025.2462149