

GEN AI-EMPOWERED MIDDLE SCHOOL ENGLISH TEACHING THROUGH 'ONE CORE, THREE STAGES, AND FIVE DIMENSIONS'

LIK, J. K. M.¹ – HUSSAIN, Y.² – HALABI, K. N. M.^{3*} – GENE, S. E.¹

¹ Faculty of Creative Industries, City University Malaysia, Kuala Lumpur, Malaysia.

² Faculty of Education and Liberal Studies, City University Malaysia, Kuala Lumpur, Malaysia.

³ School of Social Science, Education and Creative Arts, Lincoln University College, Selangor, Malaysia.

*Corresponding author
e-mail: khairunnisa[at]lincoln.edu.my

(Received 28th January 2026; revised 20th March 2026; accepted 31st March 2026)

Abstract. This study investigates the pedagogical pathways and mechanisms through which Generative Artificial Intelligence (GenAI) specifically ChatGPT empowers middle school English teaching. Guided by the “One Core, Three Stages, and Five Dimensions” framework, the research employed a qualitative case study design involving a series of professional development webinars for English teachers in Hunan Province, China. Data were collected through webinar transcripts, interactive discussions, and reflective essays, and analysed using NVivo-assisted thematic analysis. The findings identified five key themes: enhancement of pedagogical competence, increased teacher motivation and reflective practice, student engagement and personalized learning, ethical awareness and responsible AI use, and the need for continuous professional development and institutional support. Collectively, these themes demonstrate that GenAI fosters innovative, learner-centred teaching while also presenting ethical and professional challenges that require systematic guidance. The study concludes that sustainable AI integration in language education depends on balancing technological innovation with humanistic pedagogy, ethical awareness, and institutional capacity building. Recommendations for future research include longitudinal and mixed-method studies exploring student outcomes, teacher adaptation, and contextual variations in AI adoption.

Keywords: *Generative Artificial Intelligence (GenAI), ChatGPT, English Language Teaching (ELT), teacher professional development, pedagogical innovation*

Introduction

In recent years, the rapid development of generative artificial intelligence (GenAI) has begun to transform educational practice worldwide. Artificial intelligence (AI) more broadly is recognised by organisations such as the UNESCO as having “the potential to address some of the biggest challenges in education, innovate teaching and learning practices, and accelerate progress towards SDG 4”. Within the specific domain of language teaching, GenAI tools such as large-language-model chatbots, automated writing feedback systems and adaptive reading platforms are opening new possibilities for more scaffolded, personalised, and interactive learning experiences (Moorhouse and Wong, 2025). In the context of middle school English teaching, these developments are especially significant. English as a foreign or second language becomes foundational in many contexts at secondary levels, and the middle-school stage is a critical transitional period: students move from more guided learning towards increased autonomy and communicative competence. Yet many middle school English classrooms continue to rely on traditional pedagogies emphasising rote memorisation, grammar-translation and

teacher-centred instruction, which may limit student engagement, creative language use and learner agency. The findings of the study reveal that the emotional teaching value is positively associated with students' aesthetic ability and their positive outcome. Against this backdrop, GenAI offers unique affordances: adaptive feedback on writing, conversational simulations, multimodal reading enrichment, and differentiated scaffolding which can align with individual learner needs (Wang, 2024).

However, effective integration of GenAI into middle school English teaching is not automatic or straightforward. Research indicates that many K-12 settings and middle school classrooms lack coherent frameworks or systematic pathways for AI adoption. For example, a systematic review of GenAI use in K-12 education finds that while the technology is appearing more frequently, empirical studies are still few and often lack attention to the full pedagogical ecosystem. Moreover, teacher preparedness, ethical issues, student autonomy, digital literacy and motivational aspects require careful attention (Sperling et al., 2025). Therefore, this study aims to respond to the need for a structured approach to integrating GenAI into middle school English teaching by proposing a "One Core, Three Stages, and Five Dimensions" framework. This framework is designed to provide both the philosophical foundation and the practical pathway and mechanism through which GenAI can empower English teaching in middle school settings. As national policies in many countries including China's "Education Informatization 2.0" initiative emphasise intelligent education and digital transformation, there is increasing impetus to embed AI in K-12 contexts. A recent U.S. Department of Education report emphasises the importance of "keeping humans in the loop" and aligning AI-enabled systems with educator goals and learner needs (USDE, 2023). Thus, the proposed framework aligns with policy imperatives and augments the evidence base for GenAI-enabled pedagogy in English teaching.

The overall aim of this research is to investigate the path and mechanism by which GenAI empowers middle school English teaching, underpinned by the "One Core, Three Stages, and Five Dimensions" structure. The research addresses the following questions: (1) What is the central "core" philosophy of GenAI-empowered middle school English teaching?, (2) What are the three key stages of implementation required for effective integration of GenAI in the English classroom? (3) What are the five pedagogical "dimensions" (language skills, motivation, creativity, ethics, digital literacy) through which GenAI impacts teaching and learning? And (4) How do these elements interact in a mechanism that can guide teacher practice, curriculum design and policy for middle school English teaching? This paper addresses a critical gap such as the lack of structured, pedagogically-grounded frameworks for integrating GenAI into middle school English teaching. By proposing the "One Core, Three Stages, and Five Dimensions" model, the study offers both a conceptual lens and a practical roadmap. As education moves into a new era of digital and AI-enabled learning, this research may help English teachers, school leaders and policy makers align technological innovation with language pedagogy, student motivation, creative capacity and ethical/digital literacies ultimately empowering learners in a rapidly evolving world.

Literature review

This study's core conceptual framework is structured as One Core, Three Stages, and Five Dimensions, each component serving to clarify how GenAI can constructively empower middle school English teaching.

One core: AI-Driven personalised learning

At the heart of the framework lies the principle of AI-driven personalised learning. This 'core' recognises that GenAI provides adaptive, responsive, and learner-centred opportunities: for example, generating personalised writing prompts or conversational dialogues matched to student proficiency and interest, giving immediate feedback, and scaffolding growth (Vorobyeva et al., 2025). In middle school English settings, this means shifting from one-size-fits-all instruction to differentiated, data-informed engagements where learners engage with language tasks suited to their zone of proximal development. Importantly, the core philosophy emphasises that AI remains a co-teacher or facilitator rather than a replacement for human teacher agency, a position reinforced by policy guidance emphasising "human in the loop" (USDE, 2023).

Three stages: preparation, integration, evaluation

The second component of the proposed framework, Three Stages, represents a sequential yet cyclical process through which GenAI can be effectively implemented in middle school English classrooms. These stages such as Preparation, Integration, and Evaluation form a pedagogical continuum that ensures the adoption of GenAI is not merely technological but meaningfully embedded in instructional design and reflective practice. Each stage reinforces the others such as preparation lays the foundation for effective classroom use; integration operationalises GenAI within the teaching and learning process; and evaluation provides the data and insights necessary for continual refinement.

Preparation marks the first critical phase, where teachers, schools, and curriculum planners establish the conditions for successful GenAI integration. This stage involves teacher professional development, infrastructure readiness, and curriculum redesign to incorporate AI-supported tasks aligned with established learning objectives. As Prilop et al. (2025) argues, educators must first cultivate AI literacy, understanding how GenAI operates, its affordances and limitations, and how to design appropriate learning prompts that elicit pedagogically valuable responses. Without this foundation, teachers risk using GenAI superficially rather than strategically. Professional training should include hands-on workshops where teachers experiment with AI tools, develop ethical awareness regarding data use, and co-create AI-embedded lesson plans. Additionally, school administrators must ensure digital infrastructure such as reliable internet, secure platforms, and classroom devices are adequate for sustained AI use. Curriculum designers should also integrate AI activities into existing syllabi, ensuring alignment with national language learning standards and 21st-century competencies such as creativity, critical thinking, and collaboration. The preparation phase, therefore, serves as the capacity-building stage that transforms teachers from passive adopters into active designers of AI-mediated learning environments.

The Integration stage represents the classroom enactment of GenAI-empowered pedagogy. In this phase, teachers translate their conceptual understanding and technical readiness into interactive learning experiences that meaningfully employ GenAI tools. For example, AI-generated dialogues can support speaking practice by simulating authentic communication contexts, while automated writing feedback systems such as GrammarlyGO or ChatGPT can help students refine their writing accuracy and fluency. Similarly, GenAI can generate adaptive reading quizzes or comprehension tasks tailored to students' proficiency levels, enhancing both engagement and inclusivity. As

Crompton et al. (2024) observes, GenAI opens new possibilities for student-centred, multimodal engagement, where learners actively interact with content and feedback in real time. However, this potential is fully realised only when accompanied by deliberate pedagogical design. Teachers must scaffold AI use such as clarifying learning intentions, modelling effective AI interaction, and fostering reflection on the generated output. In this way, GenAI becomes a co-teaching partner that extends teachers' instructional reach without displacing their central role in guiding and mediating learning.

Finally, Evaluation forms the reflective and analytical phase that closes and simultaneously renews the implementation cycle. This stage involves systematic monitoring, feedback, and adjustment, drawing on both human judgment and AI-generated analytics. Teachers assess not only traditional indicators such as vocabulary growth or grammar accuracy but also affective and ethical outcomes such as students' motivation, creativity, responsible AI use, and digital literacy development. The integration of analytics dashboards or learning management systems equipped with AI capabilities allows teachers to collect real-time data on student engagement and performance patterns. These insights support evidence-based decision-making, enabling teachers to identify which AI-mediated activities most effectively promote learning outcomes. According to the USDE (2023), such "feedback loops" are essential to any AI-enhanced educational ecosystem, as they allow educators to continuously refine instruction based on empirical data while maintaining human oversight. Evaluation also extends beyond classroom metrics; it includes reflective dialogue among teachers, students, and administrators about ethical considerations, cognitive load, and emotional well-being in AI-supported learning. Through this process, the evaluation stage transforms assessment from a terminal act into an ongoing feedback mechanism, ensuring the GenAI ecosystem evolves dynamically in response to pedagogical realities.

Five dimensions: language skills, motivation, creativity, ethics, and digital literacy

The Five Dimensions constitute the pedagogical domains through which GenAI exerts its influence on middle school English teaching. In this framework, GenAI supports not only the development of the four core language skills but also nurtures learner motivation, creativity, ethical awareness, and digital literacy, which are essential for holistic education in the AI era. Language Skills form the foundational dimension of GenAI-assisted English teaching. GenAI platforms are capable of personalizing instruction across listening, speaking, reading, and writing through adaptive feedback, multimodal simulations, and iterative learning loops. Law (2024) emphasises that such technologies can diagnose linguistic weaknesses in real time, providing targeted support that accelerates fluency and accuracy. For example, AI-based pronunciation coaches using speech recognition can correct phonetic errors, while text-generation tools can model complex sentence structures or suggest vocabulary suited to learners' levels. These features allow teachers to move from uniform instruction to differentiated learning experiences, aligning pedagogy with students' individual proficiency and learning pace. In middle school contexts, where students are transitioning from basic comprehension to communicative competence, GenAI thus plays a critical role in providing scaffolded, continuous linguistic reinforcement that enhances both skill mastery and learner confidence.

Motivation represents the affective engine that drives sustained engagement in English learning. Traditional classroom environments often struggle to maintain student

enthusiasm, particularly when lessons rely heavily on textbook exercises and grammar drills. Vorobyeva et al. (2025) argue that AI-enabled personalization fosters intrinsic motivation by allowing learners to see tangible progress and by adapting content to their interests and abilities. Chatbots and AI companions, for instance, can simulate conversational exchanges or cultural scenarios, enabling students to practice authentic communication in a safe, low-pressure setting. Moreover, the novelty of interacting with intelligent systems can increase curiosity and persistence, which are key predictors of long-term language learning success. By incorporating motivational design principles into GenAI-assisted instruction, teachers can enhance students' sense of autonomy, competence, and relatedness.

Creativity is another vital dimension through which GenAI enriches English teaching. Beyond functional language acquisition, creativity in English education involves the ability to express ideas imaginatively, to produce original texts, and to explore multiple linguistic and cultural perspectives. Zha et al. (2024) highlight how GenAI systems, when properly guided, enable co-creation between learners and technology. Students can collaborate with AI to craft stories, dialogues, or digital presentations that combine linguistic expression with visual or auditory elements. For middle school learners, who are in a formative stage of cognitive and emotional development, creative tasks supported by GenAI encourage experimentation and playfulness with language, helping them build confidence and ownership in their communicative identity. Importantly, teachers must scaffold these creative exercises to ensure that AI functions as a tool for imagination, not as a substitute for original thinking.

The Ethics dimension underscores the importance of cultivating moral and responsible use of AI technologies within the educational setting. As GenAI becomes integrated into classrooms, students must be taught to recognise issues of academic integrity, intellectual property, algorithmic bias, and privacy protection. Sperling et al. (2025) notes that ethical awareness must form part of AI literacy, particularly among adolescents who may be unaware of the broader implications of data use or automated decision-making. Middle school students should therefore engage in guided discussions about when and how AI assistance is appropriate, how to credit AI-generated content, and how to critically assess the fairness and reliability of algorithmic outputs. This ethical education is not merely a safeguard against plagiarism but a means of fostering digital citizenship and critical consciousness. Through explicit instruction and teacher modelling, ethics becomes an integral learning outcome that complements linguistic and technological competence.

Finally, Digital Literacy represents the meta-cognitive layer of the framework, encompassing the ability to understand, evaluate, and manage digital technologies responsibly. In the GenAI era, digital literacy extends beyond basic ICT skills to include AI literacy. The capacity to comprehend how AI systems function, interpret their outputs, and identify potential limitations (Sperling et al., 2025). Students should learn to verify AI-generated information, distinguish between authentic and synthetic texts, and understand the processes behind language generation. Teachers, in turn, must integrate explicit instruction on AI reasoning, prompt design, and data ethics into English lessons. When students grasp how AI tools operate, they can engage with them critically and creatively, transforming passive consumption into active, informed participation in digital discourse.

Materials and Methods

Research design

This study employed a qualitative research design to explore teachers' and students' experiences with GenAI in middle school English teaching. As Creswell and Creswell (2017) explain, qualitative inquiry seeks to understand human perspectives through descriptive data and open-ended responses. The case study method was adopted because it enables in-depth examination of a phenomenon within its authentic educational context. According to Yin (2018), case studies are appropriate when the boundary between the phenomenon and its setting is unclear. Given that GenAI use in classrooms involves complex interactions between pedagogy, technology, and learner behaviour, this approach provided a holistic understanding. The research process followed systematic stages from data collection through interviews and observations to thematic analysis to uncover how the "One Core, Three Stages, and Five Dimensions" framework operates in practice.

Webinar, sampling technique and participants

To support teachers' professional development and strengthen their Computer-Assisted Language Learning (CALL) competencies, the researcher was invited by a higher education institution in Hunan Province, China, to conduct a series of webinars focusing on the integration of GenAI in English language teaching. The webinars introduced participants to AI-supported pedagogical strategies aligned with the "One Core, Three Stages, and Five Dimensions" framework. A purposeful sampling technique was employed to identify participants who could best represent the population of interest such as middle school English teachers currently engaged in technology-assisted instruction. This sampling method allowed for the selection of individuals with relevant experience and motivation to apply GenAI in classroom contexts. Demographic information including age, gender, years of teaching experience, and highest academic qualification was collected through an online questionnaire administered prior to the webinar. The participants' profiles were then summarized and categorized, as shown in *Table 1* and *Table 2*.

Table 1. Demographic profile of participants.

Variable	Category	Frequency (n)	Percentage (%)
Gender	Male	6	30 %
	Female	14	70 %
Age	25–34 years	5	25 %
	35–44 years	9	45 %
	45 years and above	6	30 %
Teaching Experience	1–5 years	4	20 %
	6–10 years	8	40 %
	More than 10 years	8	40 %
Highest Qualification	Bachelor's Degree	5	25 %
	Master's Degree	12	60 %
	Doctorate (PhD)	3	15 %

Table 2. Webinar details.

Session	Duration	Main Topic	Sub-topics
1	120 minutes	Integrating Generative Artificial Intelligence	-Welcome and overview of the professional development programme

		(GenAI) in English Language Teaching	-Introduction to the objectives of the webinar series and expected learning outcomes -Discussion on the significance of digital and AI literacy in modern English teaching -Historical context: from CALL to GenAI-based pedagogy
2	120 minutes	Understanding GenAI in Language Education	-Defining Generative Artificial Intelligence and differentiating it from conventional AI -Exploring GenAI applications such as ChatGPT, GrammarlyGO, and translation bots -Demonstrating practical classroom applications for reading, writing, speaking, and listening -Identifying the advantages and pedagogical implications of AI-assisted learning
3	120 minutes	Pedagogical Innovation through AI Empowerment	-Examining the "One Core, Three Stages, and Five Dimensions" framework for GenAI implementation -Showcasing lesson design models integrating GenAI tools for communicative learning -Discussing strategies for personalized instruction and adaptive assessment using AI -Reviewing classroom management and scaffolding approaches in AI-embedded teaching
4	120 minutes	Ethical and Practical Challenges in AI-based Teaching	-Highlighting ethical concerns such as plagiarism, academic integrity, and algorithmic bias -Understanding issues of data privacy, transparency, and responsible use -Reviewing institutional policies and teacher responsibilities when employing AI -Presenting case examples of ethical dilemmas and mitigation strategies
5	120 minutes	Interactive Workshop and Practical Demonstration	-Live demonstration of GenAI tools in lesson delivery (ChatGPT for role-playing, automated feedback) -Hands-on activities allowing participants to create AI-augmented lesson plans -Group collaboration and problem-solving exercises using AI-assisted content generation
6	90 minutes	Open Forum, Reflection, and Conclusion	-Open Q&A session addressing participants' experiences and challenges -Sharing insights from teachers' pilot applications in their own classrooms -Summarizing key learning points and reflecting on GenAI's pedagogical potential -Inviting participants to submit reflective journals two weeks post-webinar for follow-up analysis

Data collection and analysis

Data were gathered throughout the six webinar sessions using a multi-method qualitative approach to capture teachers' experiences with GenAI in English language teaching. Each webinar was conducted live via the institution's online learning platform and recorded for transcription and analysis with participants' consent. Evidence was drawn from discussion transcripts, interactive polls, chat exchanges, and reflective essays submitted two weeks after the webinars. These multiple sources provided rich qualitative data on participants' perceptions, attitudes, and practical engagement with AI-enhanced pedagogy.

The collected data were analysed thematically following Braun and Clarke (2021) six-phase model: familiarisation, coding, theme development, review, definition, and reporting. All textual data were imported into NVivo 14 software to assist in the systematic organisation, coding, and retrieval of patterns across datasets. NVivo supported the identification of key categories related to pedagogical innovation, ethical awareness, digital literacy, and motivational change. To ensure trustworthiness, triangulation was employed across data types (webinar transcripts, observation notes, and reflective essays), and peer debriefing was used to validate coding consistency and interpretive rigour.

Participants were encouraged to share their experiences using ChatGPT during and after the webinar sessions. They reflected on how the tool influenced their teaching preparation, lesson delivery, and student engagement. To facilitate deeper insights, the researcher posed several targeted questions related to the use of Generative Artificial Intelligence (GenAI) in classroom practice. These questions included: How did ChatGPT assist you in lesson planning or materials design?; What challenges did you encounter when applying ChatGPT in language instruction?; In what ways do you think GenAI tools can support or hinder students' learning motivation and creativity?; How do you ensure academic integrity and responsible AI use in your classes?; and What future professional development or institutional support would help you integrate GenAI more effectively? Participants' written and verbal responses to these prompts were later analysed thematically using NVivo to identify emerging patterns and pedagogical implications.

Results and Discussion

The data analysis identified five main themes emerging from participants' reflections, webinar discussions, and post-session essays. Using NVivo-assisted thematic analysis, the researcher coded and categorised patterns that captured teachers' experiences, attitudes, and pedagogical insights regarding the integration of GenAI and ChatGPT in English language teaching. These themes collectively reveal how middle school English teachers conceptualised GenAI as both a pedagogical innovation and a professional challenge in contemporary classrooms. The five themes are (1) Enhancement of Pedagogical Competence through GenAI, (2) Increased Teacher Motivation and Reflective Practice, (3) Student Engagement and Personalized Learning Opportunities, (4) Ethical Awareness and Responsible AI Use and (5) Professional Development and Institutional Support.

Enhancement of pedagogical competence through GenAI

The first theme highlights how participation in the webinars enhanced teachers' pedagogical competence and confidence in using GenAI tools such as ChatGPT. Many participants acknowledged that the training sessions deepened their understanding of how AI could support lesson planning, material generation, and formative assessment. They discovered that ChatGPT could be used to design contextually relevant reading passages, generate grammar exercises, and create prompts for speaking activities, thereby reducing preparation time while promoting learner-centred approaches. Several teachers reflected that AI integration encouraged them to rethink traditional teaching strategies and move toward more interactive and inquiry-based instruction. NVivo coding revealed that the most frequently mentioned keywords were lesson design, feedback, and innovation, indicating a shift in pedagogical thinking. Teachers also noted that GenAI provided models of natural language use that could be adapted for classroom demonstrations. However, a few participants expressed concerns about over-reliance on automated tools and emphasized the teacher's continued role in guiding learning. Overall, the findings suggest that exposure to GenAI applications strengthened teachers' technological-pedagogical integration, improved their confidence in employing digital tools, and promoted reflective awareness of how AI can complement not replace human expertise in language teaching.

Increased teacher motivation and reflective practice

The second theme captures how engagement with GenAI fostered professional motivation and reflective teaching practice. Participants described the webinars as intellectually stimulating and personally empowering, reigniting their curiosity to explore emerging educational technologies. Many teachers reported feeling inspired by hands-on activities involving ChatGPT, which allowed them to experiment with lesson generation, vocabulary-building tasks, and conversational simulations. NVivo coding indicated recurring expressions such as rejuvenation, inspiration, and self-improvement, reflecting a sense of renewed professional enthusiasm. Teachers also engaged in reflective dialogue about their evolving teaching identities in the digital era, acknowledging that adopting AI tools required adaptability, openness, and lifelong learning. Several participants mentioned that discussing challenges such as limited technical infrastructure or uncertainty about prompt design helped them critically evaluate their own pedagogical assumptions. The reflective essays submitted two weeks after the webinar further demonstrated a growth mindset, as teachers articulated strategies for continuous experimentation and self-assessment. Although some participants expressed apprehension about keeping pace with rapid technological changes, the collective tone was positive, underscoring that GenAI exposure not only expanded pedagogical knowledge but also encouraged transformative reflection on the teacher's evolving role as a facilitator, innovator, and ethical guide in AI-mediated classrooms.

Student engagement and personalized learning opportunities

The third theme emphasizes teachers' perceptions of GenAI as a tool for promoting student engagement and personalized learning. Participants observed that AI-enabled applications could make English lessons more interactive, context-rich, and learner-driven. ChatGPT, for instance, was praised for its ability to simulate realistic conversations, provide instant feedback, and adjust difficulty based on students' responses. Teachers highlighted how these features could accommodate diverse learning styles and proficiency levels, fostering inclusivity within large classrooms. NVivo results indicated frequent co-occurrence between engagement, personalization, and motivation, suggesting that educators viewed AI as a catalyst for differentiated instruction. Some teachers noted that learners became more eager to practice speaking and writing when interacting with AI-generated prompts or receiving automated corrections. Others appreciated how GenAI reduced students' fear of making mistakes by providing a supportive, non-judgmental environment. Nonetheless, participants acknowledged the importance of teacher mediation to ensure meaningful interaction and prevent superficial learning. They proposed blending AI use with collaborative group work and peer review to sustain authentic communication. Overall, the findings reveal that teachers regarded GenAI as an effective supplement to traditional pedagogy, enhancing learner participation and offering opportunities for adaptive, individualized language learning experiences aligned with 21st-century educational goals.

Ethical awareness and responsible AI use

The fourth theme concerns the emergence of ethical awareness among teachers regarding responsible AI integration in education. During discussions and reflective essays, participants frequently raised issues related to academic integrity, data privacy,

and algorithmic bias. Many acknowledged that while GenAI offers pedagogical benefits, it also introduces ethical dilemmas that educators must address proactively. Teachers were particularly concerned about students' potential misuse of ChatGPT for completing assignments or generating essays without genuine effort. NVivo coding showed repeated references to plagiarism, authenticity, and critical thinking, indicating participants' shared recognition of the moral dimensions of AI-assisted learning. The webinars encouraged teachers to explore strategies for fostering AI ethics in the classroom such as setting clear guidelines for acceptable AI use, teaching citation practices for AI-generated content, and raising awareness about digital footprints. Participants also emphasized the need to model ethical behaviour themselves by demonstrating transparency and accountability when using AI tools. A few teachers suggested incorporating short lessons on data protection and algorithmic fairness to build students' digital citizenship skills. Overall, this theme underscores that teachers viewed ethical education as an integral complement to technological innovation, reaffirming the role of educators as ethical gatekeepers in the age of intelligent language learning.

Professional development and institutional support

The final theme highlights teachers' strong demand for ongoing professional development and institutional support to sustain effective GenAI integration. Participants agreed that while the webinars provided valuable foundational knowledge, continuous training was necessary to keep up with rapid technological advances and evolving pedagogical practices. Many participants expressed a desire for structured follow-up programmes, peer mentoring, and collaborative workshops to deepen their skills in prompt engineering, AI-assisted assessment, and digital ethics. NVivo analysis identified frequent codes such as training, resources, and support system, reflecting the perceived importance of institutional backing. Teachers emphasized that school administrators and policymakers must play a proactive role in providing technical infrastructure, access to AI tools, and clear implementation guidelines. Some participants suggested integrating AI literacy modules into teacher education curricula and organizing interdisciplinary communities of practice. Despite these challenges, teachers conveyed optimism about the potential of GenAI to transform English language education when supported by coherent institutional strategies. Collectively, this theme demonstrates that sustainable adoption of AI in education requires not only individual initiative but also systemic investment in capacity building and institutional collaboration to ensure equitable and ethical technological advancement.

The findings of this study demonstrate that GenAI holds significant potential to transform middle school English teaching when implemented through a structured pedagogical framework such as the "One Core, Three Stages, and Five Dimensions" model. Consistent with Moorhouse and Wong (2025) as well as Crompton et al. (2024), participants perceived GenAI particularly ChatGPT as a catalyst for enhancing pedagogical competence and classroom innovation. Teachers' growing confidence in designing AI-supported lessons illustrates a shift from traditional instruction to technology-mediated, learner-centred pedagogy, aligning with Law (2024) who emphasizes the role of GenAI in improving linguistic scaffolding and content adaptability.

Increased teacher motivation and reflective practice suggest that professional engagement with AI encourages lifelong learning and adaptability as well as qualities

essential for educators navigating digital transformation. Similar to findings by Prilop et al. (2025), the webinars cultivated reflective awareness of teaching roles in AI-enhanced contexts, reinforcing the human-AI partnership in education. Teachers also observed that GenAI fostered student engagement and personalized learning, supporting previous evidence that AI can accommodate diverse learner profiles through adaptive feedback (Vorobyeva et al., 2025).

At the same time, concerns about plagiarism, authenticity, and algorithmic bias confirm the need for ethical guidance and digital citizenship education, echoing Sperling et al. (2025) and the USDE (2023). Finally, participants' calls for sustained training highlight that successful GenAI integration depends on continuous professional development and institutional infrastructure.

Overall, the discussion affirms that effective GenAI adoption requires balanced attention to pedagogical competence, motivation, personalization, ethics, and systemic support. When guided by structured models and ethical frameworks, GenAI can empower teachers to deliver dynamic, inclusive, and reflective English language instruction bridging technological innovation with humanistic education.

Conclusion

This study explored how GenAI, particularly ChatGPT, can empower middle school English teaching through the structured framework of "One Core, Three Stages, and Five Dimensions." The findings revealed that GenAI enhances teachers' pedagogical competence, promotes reflective practice, and supports personalized learning experiences. Teachers developed greater confidence in using AI to design lessons, assess student progress, and foster classroom engagement. Moreover, the study identified growing ethical awareness and the need for institutional support to ensure responsible and sustainable integration of AI in education.

The implications of this research are both pedagogical and institutional. For educators, the results highlight the importance of professional development that combines technological training with ethical and pedagogical reflection. School administrators and policymakers should provide infrastructure, clear guidelines, and continuous capacity-building to embed AI literacy in teacher education and curriculum design. Integrating GenAI into English instruction must remain learner-centred, emphasizing creativity, collaboration, and critical thinking rather than automation alone.

Future research should extend beyond qualitative case studies to include longitudinal or mixed-method investigations that measure learning outcomes and behavioural changes among students. Comparative studies across educational levels or cultural contexts could reveal how contextual factors influence AI adoption and effectiveness. Additionally, exploring student perspectives on GenAI-assisted learning would offer a more comprehensive understanding of its motivational and cognitive impact. Continued scholarly inquiry will be vital to shaping AI-driven education that remains ethical, inclusive, and pedagogically meaningful in the evolving digital landscape.

Acknowledgement

This research was self-funded. The authors would like to thank all participants for their valuable time and contributions.

Conflict of interest

The authors confirm that there is no conflict of interest involve with any parties in this research study.

REFERENCES

- [1] Braun, V., Clarke, V. (2021): *Thematic analysis: A practical guide*. – Sage Publications 376p.
- [2] Creswell, J.W., Creswell, J.D. (2017): *Research design: Qualitative, quantitative, and mixed methods approaches*. – Sage Publications 270p.
- [3] Crompton, H., Edmett, A., Ichaporria, N., Burke, D. (2024): AI and English language teaching: Affordances and challenges. – *British Journal of Educational Technology* 55(6): 2503-2529.
- [4] Law, L. (2024): Application of generative artificial intelligence (GenAI) in language teaching and learning: A scoping literature review. – *Computers and Education Open* 6: 13p.
- [5] Moorhouse, B.L., Wong, K.M. (2025): *Generative Artificial Intelligence and Language Teaching*. – Cambridge University Press 94p.
- [6] Prilop, C.N., Mah, D.K., Jacobsen, L.J., Hansen, R.R., Weber, K.E., Hoya, F. (2025): Generative AI in teacher education: Educators' perceptions of transformative potentials and the triadic nature of AI literacy explored through AI-enhanced methods. – *Computers and Education: Artificial Intelligence* 9: 15p.
- [7] Sperling, K., Stenliden, L., Mannila, L., Hallström, J., Nordlöf, C., Heintz, F. (2025): Perspectives on AI literacy in Middle School Classrooms: An Integrative Review. – *Postdigital Science and Education* 7(3): 719-749.
- [8] U.S. Department of Education (USDE) (2023): *Artificial intelligence and the future of teaching and learning: Insights and recommendations*. – U.S. Department of Education, Office of Educational Technology 71p.
- [9] Vorobyeva, K.I., Belous, S., Savchenko, N.V., Smirnova, L.M., Nikitina, S.A., Zhdanov, S.P. (2025): *Personalized Learning through AI: Pedagogical Approaches and Critical Insights*. – *Contemporary Educational Technology* 17(2): 16p.
- [10] Wang, B. (2024): Exploring the potential of artificial intelligence in English education. – In *Proceedings of the 1st International Conference on Engineering Management, Information Technology and Intelligence* 4p.
- [11] Yin, R.K. (2018): *Case study research and applications*. – Thousand Oaks, CA: Sage 414p.
- [12] Zha, S., Qiao, Y., Hu, Q., Li, Z., Gong, J., Xu, Y. (2024): Designing child-centric AI learning environments: Insights from LLM-enhanced creative project-based learning. – *ArXiv Preprint* 33p.