

# Fostering Deep Learning in the AI Era: Integrating Conscious, Mindful and Joyful Principles in a ChatGPT-Assisted Writing Lesson

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## ABSTRACT

Employing a qualitative case study approach, this research investigates the integration of deep learning principles (conscious, mindful, and joyful) in ChatGPT-assisted writing lessons. The study involved 33 twelfth-grade students at UPT SMAN 1 Luwu Timur and focused on explanation text writing using AI as a cognitive and linguistic scaffold. Data were collected from student worksheets containing written reflections and were analysed thematically using a deep learning principles (conscious, mindful, and joyful) framework. Findings revealed that: (1) The Conscious principle was evident as students actively deconstructed text structures and built metacognitive awareness; (2) The Mindful principle manifested through critical assessment of AI outputs and reflection on their learning emotions and processes; (3) The Joyful principle emerged from feelings of competence, creativity, and increased self-efficacy upon successfully creating and refining their work. The teacher-researcher played a key role in guiding students to use AI ethically and reflectively, ensuring that technology served as a scaffold, not a substitute for thinking. The deep learning principles (conscious, mindful, and joyful) framework thus provides a robust structure for leveraging AI in ways that promote cognitive understanding (Conscious), critical thinking and self-awareness (Mindful), and a motivating learning environment (Joyful).

## KEYWORDS

Deep Learning, ChatGPT, AI in Education, Explanation Text, EFL Writing, Qualitative Case Study

## INTRODUCTION

The integration of Artificial Intelligence (AI), particularly Generative AI tools like ChatGPT, has reshaped the landscape of English as a Foreign Language (EFL) writing instruction. These tools offer real-time feedback, content generation, and structural guidance, enabling learners to refine their writing with increased autonomy and engagement. ChatGPT, as a Large Language Model (LLM), has demonstrated its capacity to identify surface-level errors and support learners in organising ideas, improving grammar,

and enhancing vocabulary (Al-Abri, 2025; Algaraady & Mahyoob, 2023; Guo, 2025; Hao & Zhang, 2026; Liu et al., 2025). Moreover, AI-assisted writing environments have been shown to foster motivation and self-efficacy among EFL students, especially when embedded within interactive and personalised learning contexts.

In parallel with these technological developments, Indonesia's national education reform has introduced Deep Learning as a foundational pedagogical approach to address the learning crisis and prepare students for the complexities of the 21st century. Deep Learning emphasises learning that is conscious, meaningful, and joyful, aiming to cultivate higher-order thinking, ethical awareness, and emotional engagement (Braun & Clarke, 2006; Li et al., 2025; Nafi'ah & Faruq, 2025). The Deep Learning framework encourages students to connect knowledge with real-world contexts, reflect on their learning processes, and experience learning as a holistic and transformative journey.

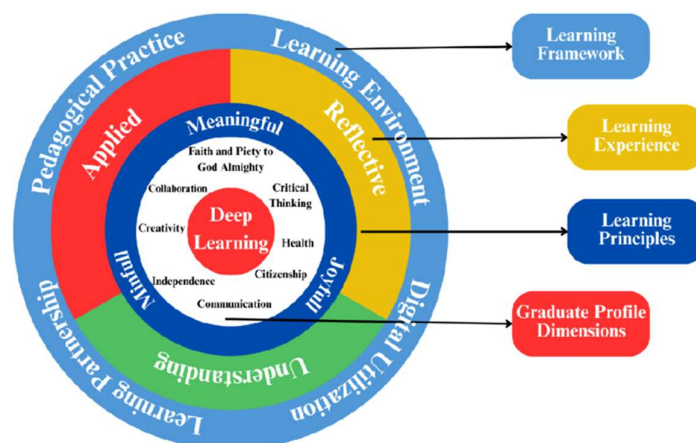


Figure 1. The Principle of Deep Learning Framework

To visually represent these principles, the image titled *"Principles of Deep Learning"* illustrates the triadic foundation of Indonesia's pedagogical reform. *Conscious learning* refers to students' development of metacognitive awareness and intentionality in their writing (Consadine & Goodman, 2025; Jones, 2023). *Mindful learning* emphasises focus, ethical reflection, and critical engagement with AI-generated content (Aure & Cuenca, 2024; Bozkurt et al., 2024; Yusuf et al., 2024). Meanwhile, *Joyful learning* highlights emotional satisfaction, creativity, and increased self-efficacy in the writing process (Tao & Yu, 2024; Wu & Xu, 2025). These principles are not only philosophical ideals but are operationalised in this study through the Deep Learning framework, guiding the integration of ChatGPT into a reflective and student-centred writing lesson.

Despite the growing body of global research, which has explored the role of AI in enhancing writing proficiency and motivation, and Indonesia's adoption of Deep Learning as a national strategy, there remains a critical gap in connecting these two domains. Specifically, how can AI tools like ChatGPT be pedagogically integrated into classroom practice in ways that align with the principles of Deep Learning?

Recent empirical studies have emphasised the transformative role of ChatGPT in enhancing EFL learners' writing performance, particularly in areas such as organisation, coherence, grammar, and vocabulary (Arefian et al., 2024; Song & Song, 2023). The AI tool's ability to provide immediate, personalised feedback has been shown to increase learners' motivation and engagement, allowing them to revise and refine their writing in real time. This aligns with Vygotsky's social constructivist theory, which highlights the importance of collaborative scaffolding in reaching learners' Zone of Proximal Development (ZPD). In this context, ChatGPT functions as a virtual peer, offering linguistic support and modelling effective writing strategies that learners can internalise (Song & Song, 2023). Moreover, the interactive nature of AI-assisted writing fosters self-regulation and personalised learning, contributing to long-term skill development.

Nevertheless, while the pedagogical potential of ChatGPT is widely acknowledged, its integration into classroom practice remains uneven and under-theorised. Teachers have expressed concerns about overreliance, ethical use, and the erosion of foundational writing skills. Additionally, ChatGPT's limitations in detecting deep structural and pragmatic errors underscore the need for human guidance and reflective pedagogy (Algaraady & Mahyoob, 2023). These concerns resonate with Indonesia's national framework for Deep Learning, which calls for learning that is not only technologically enhanced but also conscious, meaningful, and joyful. Therefore, there is a pressing need to explore how AI tools like ChatGPT can be integrated into deep learning-aligned instruction to foster deep learning in secondary school contexts. The following is the framework of this research:

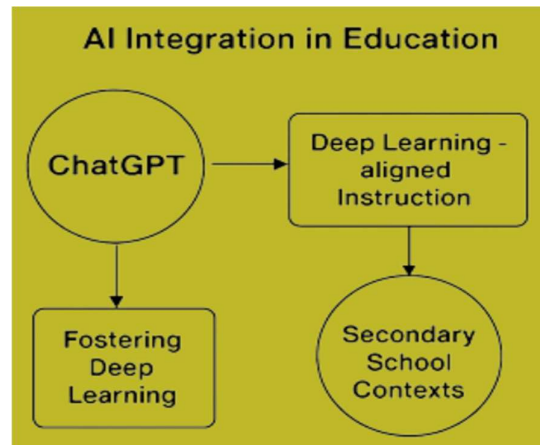


Figure 2. Framework of the Research

## METHOD

This study employed a qualitative case study design to explore how ChatGPT-assisted instruction can foster deep learning in EFL writing, specifically within the context of explanation text writing. The case study approach was chosen to allow in-depth investigation of student experiences in a real classroom setting, guided by the teacher-researcher. The study was framed by the deep learning principles (Conscious, Mindful, and Joyful) derived from Indonesia's national Deep Learning framework. The participants were 29 twelfth-grade students from UPT SMAN 1 Luwu Timur. They were selected as an intact class engaged in a structured writing lesson facilitated by the teacher-researcher. The teacher also served as the classroom researcher, designing the instructional sequence and collecting data through guided activities and reflections.

To capture students' experiences with ChatGPT-assisted writing and their engagement with deep learning principles, this study employed a combination of instructional design and qualitative instruments. The instructional procedure itself served as a structured intervention, while the instruments supported systematic data collection aligned with the study's conceptual framework.

**Instructional Procedure:** Students participated in a multi-phase writing activity focused on explanation texts. The procedure included:

1. Initial drafting based on prior knowledge and classroom input;
2. Interaction with ChatGPT to generate alternative versions, receive feedback, and explore structural improvements;
3. Guided revision and reflection, emphasising metacognitive awareness, ethical use

of AI, and emotional engagement

The lesson was explicitly aligned with the deep learning principles (Conscious, Mindful, and Joyful) framework, encouraging students to think consciously about text structure, reflect mindfully on their process, and experience joy through creative expression and successful revision.

Three instruments were used to collect data:

1. Student Worksheets: These included original drafts, ChatGPT-generated texts, and revised versions. The worksheets enabled analysis of students' writing development and revision strategies across different stages of the activity.
2. Written Reflections: students responded to guided prompts about their learning experience, emotions, and perceptions of AI use. The reflection questions were designed to elicit responses aligned with deep learning principles (Conscious, Mindful, and Joyful), such as awareness of writing choices, ethical considerations, and emotional engagement.
3. Observation Sheets: The teacher-researcher used structured observation sheets to document classroom interactions, student engagement, and behavioural indicators of deep learning.

Data were collected throughout the instructional sequence. Student artefacts (worksheets and reflections) were gathered at each phase of the writing process, while classroom observations were recorded in real time. This triangulated approach ensured a rich and credible dataset for thematic analysis.

The data were analysed using thematic analysis, following Braun and Clarke's (2006) six-phase framework. This method provides a flexible and accessible approach to identifying, analysing, and reporting patterns within qualitative data. Thematic analysis was chosen for its compatibility with both inductive and deductive coding, allowing the researcher to explore emergent insights while remaining aligned with the study's conceptual framework.

Coding was guided by the deep learning principles (Conscious, Mindful, and Joyful) framework, adapted from Indonesia's national Deep Learning principles (Ministry of Primary and Secondary Education, 2025). The following thematic categories were used to organise and interpret the data:

1. Conscious: Themes related to metacognitive awareness, structural understanding, and intentional revision;

2. Mindful: Themes reflecting critical evaluation of AI outputs, ethical considerations, and emotional regulation;
3. Joyful: Themes capturing motivation, creativity, and self-efficacy in the writing process.

This framework enabled both semantic and latent analysis, capturing not only what students expressed explicitly, but also the underlying reflections and emotional responses embedded in their writing experiences. The deep learning principles (Conscious, Mindful, and Joyful) category served as analytical lenses to assess how ChatGPT-assisted instruction supported deep learning in the classroom.

## **RESULTS**

This section presents the findings from 29 twelfth-grade students who participated in a structured writing lesson integrating ChatGPT. The data were collected through student worksheets, AI-generated texts, revised drafts, written reflections, and classroom observations. Thematic analysis was conducted using the deep learning principles (Conscious, Mindful, and Joyful) framework.

### ***Conscious: Awareness of Structure and Intentional Revision***

In the initial phase, students were asked to write an explanation text about the process of rain based on their prior knowledge. The results showed:

- a. 21 students correctly identified at least three core stages of the rain process (e.g., evaporation, condensation, precipitation).
- b. 8 students included additional scientific terms such as advection, transpiration, or infiltration, indicating partial conceptual depth.
- c. 12 students expressed difficulty in organising ideas or selecting appropriate vocabulary in English.

These findings indicate that students began with varying levels of structural understanding and linguistic confidence, reflecting the early stage of Conscious learning.

### ***Mindful: Critical Evaluation of AI Output***

In the second phase, students used ChatGPT to generate explanation texts and compared them with their initial drafts. Their reflections revealed:

- a. 26 students stated that the AI-generated text was “structured clearly and logically,” helping them understand the correct sequence of events.
- b. 18 students appreciated the formal and precise vocabulary used by ChatGPT.

- c. 17 students identified limitations in the AI-generated text, such as a lack of personalisation, insufficient detail, or generic phrasing.

These overlapping responses show that students engaged in Mindful learning, critically evaluating the strengths and weaknesses of AI-generated content.

### *Joyful: Emotional Engagement and Confidence in Revision*

In the final phase, students revised their texts using insights from ChatGPT and teacher feedback. The results showed:

- 24 students revised their texts by adding transitions, elaborating on steps, and improving clarity.
- 22 students reported increased confidence and satisfaction with their final texts.
- 19 students reflected on the value of revision, noting that it helped them think more critically and creatively.

Students described the process as enjoyable and empowering, often using words like senang, lega, and percaya diri, indicating strong Joyful learning outcomes.

Table 1. The distribution of student responses

Instructional Phase	Deep Learning Principles	Key Indicators	Number of Students	Examples / Insights
Phase 1: Initial Drafting	Conscious	Identified core stages of the rain process (evaporation, condensation, precipitation)	21	"Evaporasi, kondensasi, presipitasi"
		Included scientific terms beyond basic stages (e.g., adveksi, infiltrasi)	8	"Evaporasi, transpirasi, run off, infiltrasi"
		Expressed structural uncertainty or limited vocabulary	12	"Saya bingung menyusun kalimat dalam bahasa Inggris"
Phase 2: ChatGPT Interaction	Mindful	Recognized logical structure in AI-generated text	26	"Teks AI sangat terstruktur dan mudah dipahami"
		Noted formal and precise vocabulary usage	18	"Bahasa yang digunakan oleh ChatGPT sangat formal dan sesuai konteks"
		Critiqued AI limitations (generic, impersonal, lacking detail)	17	"Teks AI kurang memiliki contoh nyata dan terasa umum"
Phase 3: Revision & Reflection	Joyful	Revised structure using transitions and elaboration	24	"Saya menambahkan kata penghubung seperti first, then, finally"
		Expressed emotional satisfaction and confidence	22	"Saya merasa lebih percaya diri dan bangga dengan hasil revisi saya"
		Reflected on critical thinking and creative ownership	19	"Saya belajar bahwa revisi bukan hanya memperbaiki, tapi juga membuat teks lebih hidup"

Table 1 summarises the distribution of student responses across the three instructional phases and the deep learning principles. The data show that:

- In the Conscious phase, most students demonstrated basic understanding of the rain

process, though some revealed gaps in structural knowledge and vocabulary use.

2. During the Mindful phase, students actively engaged with ChatGPT outputs, recognising both strengths (e.g., logical structure, formal vocabulary) and limitations (e.g., lack of detail or personalisation). This indicates critical evaluation and ethical awareness.
3. In the Joyful phase, students revised their texts with greater confidence and creativity. Their reflections revealed emotional satisfaction and a sense of ownership over their writing.

These findings affirm that ChatGPT-assisted instruction, when embedded within a deep learning framework, can foster metacognitive awareness, critical thinking, and emotional engagement. The overlapping responses across categories suggest that students experienced deep learning as a multidimensional process, not limited to cognitive outcomes alone.

Table 2. Student-identified challenges and teacher roles in AI-assisted writing

Category	Theme	Number of Students	Representative Reflections
Challenges in Writing	Difficulty choosing appropriate vocabulary	16	"Saya kesulitan memilih kata-kata yang tepat agar penjelasan tidak membingungkan."
	Struggling with sentence structure and coherence	12	"Kadang saya bingung menyusun kalimat dalam bahasa Inggris yang benar."
	Maintaining originality and avoiding overreliance on AI	9	"Saya ingin tulisan saya tetap terasa seperti tulisan saya sendiri, bukan hanya dari AI."
Teacher's Role in AI Use	Guiding students to verify and revise AI-generated text	21	"Guru membantu saya mengecek dan memperbaiki hasil dari ChatGPT agar lebih sesuai."
	Encouraging critical thinking and ethical reflection	18	"Guru mengingatkan saya untuk tidak langsung menerima jawaban dari AI begitu saja."
	Supporting emotional confidence and writing motivation	15	"Bimbingan guru membuat saya lebih percaya diri dan semangat menulis."

Table 2 highlights two critical dimensions that emerged from student reflections: the challenges they encountered during the AI-assisted writing process, and the supportive role of the teacher in fostering critical and ethical engagement.

1. The most common challenge was vocabulary selection, followed by difficulties in sentence construction and concerns about maintaining originality. These findings suggest that while ChatGPT provides structural and lexical support, students still require guidance to internalise and personalise their writing.
2. Students consistently emphasised the importance of teacher mediation. Teachers were seen not only as linguistic guides but also as ethical mentors who helped students reflect on the boundaries of AI use, verify information, and maintain ownership of their work.

These insights reinforce the idea that AI cannot replace pedagogical presence, but rather, must be integrated within a reflective, teacher-guided learning environment. The teacher's role is essential in ensuring that students engage with AI critically, ethically, and meaningfully core tenets of the Mindful and Conscious dimensions of deep learning.

Table 3. Observed indicators of deep learning during AI-assisted writing

No	Focus Area	Description	Indicators of Deep Learning	Number of Students Observed	Observation Notes
1	Conscious Learning	Students show awareness of structure, purpose, and revision choices.	- Noticing text organization - Revising with intention - Reflecting on writing goals	24 students	Students revised the structure, added transitions, and reflected on genre conventions.
2	Critical Thinking	Students analyse ideas, evaluate feedback, and revise texts meaningfully.	- Asking probing questions - Evaluating AI suggestions critically - Providing justification	23 students	Students questioned AI outputs, identified missing details, and revised with purpose.
3	Collaboration	Students engage in peer interaction during writing and revision.	- Peer discussion - Idea sharing - Joint problem-solving	17 students	Several students consulted peers and discussed how to improve structure and clarity.
4	Mindful Engagement	Students show awareness and intentionality in using AI tools.	- Staying focused - Reflecting on process - Intentional use of AI	25 students	Students paused to compare drafts, reflected on differences, and revised thoughtfully.
5	Joyful Learning	Students express positive emotions and motivation during the activity.	- Smiling, laughter, enthusiasm - Satisfaction with results - Voluntary participation	22 students	Students showed excitement, pride, and enjoyment, especially after revising their texts.
6	Teacher–Student Interaction	The teacher facilitates learning through guidance and dialogic feedback.	- Reflective questioning - Encouraging autonomy - Dialogic support	29 students	All students received guided feedback and were encouraged to revise independently.

Table 3 shows This table shows that most students demonstrated behaviours aligned with deep learning principles, especially in Mindful Engagement and Teacher–Student Interaction. Students showed focused attention, intentional use of AI, and responded positively to reflective prompts and dialogic guidance from the teacher. While Collaboration was slightly less frequent, it still played a meaningful role in peer-supported revision and idea sharing.

Importantly, the observations also revealed strong indicators of Joyful Learning. Many students expressed enthusiasm, curiosity, and emotional satisfaction during the writing and revision process. Smiles, laughter, and voluntary participation were evident, especially when students saw improvements in their texts or successfully personalised AI-generated content. This emotional engagement reflects the Joyful dimension of deep learning, where

students experience motivation and pride through meaningful learning experiences.

Together, these findings reinforce the importance of structured guidance, reflective pedagogy, and emotionally supportive environments in fostering deep learning through AI-assisted instruction. When students are guided to think critically, revise consciously, and engage joyfully, technology becomes a tool for transformation, not just automation.

## **DISCUSSION**

The findings demonstrate that ChatGPT-assisted instruction, when embedded within a structured and reflective learning design, can effectively foster deep learning in EFL writing. Each phase of the instructional procedure contributed to different dimensions of the deep learning principles:

### ***Conscious Learning***

Students' initial drafts revealed a partial understanding of the explanation text structure. Through exposure to AI-generated models and guided revision, they developed greater metacognitive awareness and intentionality in organising their ideas. This aligns with the Conscious dimension of deep learning, which emphasises structural clarity, genre awareness, and self-monitoring during the writing process. Observational data further support this dimension. As shown in Table 3, 24 students demonstrated conscious behaviours such as noticing text organisation, revising with purpose, and reflecting on writing goals. These behaviours were evident when students added transitions, restructured paragraphs, and articulated why certain revisions were necessary. Conscious learning was not only cognitive but also strategic; students made deliberate choices to improve their texts based on both AI input and teacher guidance (Srinivasan, 2022).

### ***Mindful Learning***

Students did not accept AI outputs passively. Instead, they engaged in critical evaluation, identifying both strengths (e.g., logical flow, vocabulary) and weaknesses (e.g., generic tone, lack of detail). Their reflections show an emerging ethical awareness and understanding of AI as a tool, not a replacement for human thinking (Bankins & Formosa, 2023; Bindayel et al., 2025). This reflects the Mindful dimension, where learners are encouraged to question, adapt, and reflect on the use of technology in a responsible and thoughtful manner. Table 3 shows that 25 students demonstrated mindful engagement, staying focused on tasks, reflecting on their process, and using AI intentionally. This was reinforced by teacher prompts that encouraged students to evaluate AI suggestions critically and revise

meaningfully.

### ***Joyful Learning***

The revision process, supported by both AI and teacher feedback, led to increased confidence, motivation, and emotional satisfaction. Students expressed pride in their final texts and enjoyment in the writing process. This aligns with the Joyful dimension of deep learning, which values emotional engagement, creative expression, and a sense of accomplishment (Iqbal et al., 2025). Observations revealed that 22 students displayed joyful behaviours such as smiling, expressing satisfaction, and participating voluntarily. These emotional responses were strongest during the final revision phase, when students saw tangible improvements in their writing and felt ownership over their work.

### ***Behavioural Indicators of Deep Learning***

Table 3 shows that most students demonstrated behaviours aligned with deep learning principles. Students showed focused attention, intentional use of AI, and responded positively to reflective prompts and dialogic guidance from the teacher. While Collaboration was slightly less frequent, it still played a meaningful role in peer-supported revision and idea sharing. Importantly, the observations also revealed strong indicators of Joyful Learning. Many students expressed enthusiasm, curiosity, and emotional satisfaction during the writing and revision process. Smiles, laughter, and voluntary participation were evident, especially when students saw improvements in their texts or successfully personalised AI-generated content. This emotional engagement reflects the Joyful dimension of deep learning, where students experience motivation and pride through meaningful learning experiences.

Together, these findings reinforce the importance of structured guidance, reflective pedagogy, and emotionally supportive environments in fostering deep learning through AI-assisted instruction. When students are guided to think critically, revise consciously, and engage joyfully, technology becomes a tool for transformation, not just automation. The teacher's role remains central in mediating AI use, ensuring ethical reflection, and nurturing student agency throughout the learning process.

## **CONCLUSION**

This study concludes that ChatGPT-assisted instruction, when embedded within a structured and reflective learning design, can effectively foster deep learning in EFL writing,

particularly in the genre of explanation texts. Through a multi-phase instructional sequence, students demonstrated growth in:

1. Conscious learning, by developing metacognitive awareness of text structure and making intentional revisions;
2. Mindful learning, by critically evaluating AI-generated texts, reflecting on ethical use, and engaging thoughtfully with technology;
3. Joyful learning, by expressing emotional satisfaction, motivation, and pride in their writing achievements.

The integration of ChatGPT served not as a replacement for teacher instruction but as a scaffold within the Zone of Proximal Development, enabling students to explore, revise, and reflect with greater autonomy. The teacher's role remained central in guiding ethical engagement, prompting critical thinking, and nurturing student agency.

Classroom observations and student reflections confirmed that deep learning is not only cognitive but also behavioural and emotional. When students are supported to think consciously, act mindfully, and learn joyfully, AI becomes a transformative tool for literacy development.

Implications for Practice:

1. For Educators: Teachers should design lessons that explicitly incorporate all the deep learning principles. Their role evolves from knowledge provider to a facilitator of critical thinking, reflection, and positive learning experiences.
2. For Curriculum Designers: Learning modules should include phases for activation, application, and deep reflection, ensuring that technology use is always coupled with mindful and conscious processing.
3. For Researchers: Future research could quantitatively measure the impact of the CMJ framework on learning outcomes and apply it to other subjects and age groups.

## REFERENCES

- Al-Abri, A. (2025). Exploring ChatGPT as a virtual tutor: A multi-dimensional analysis of large language models in academic support. *Education and Information Technologies*, 30(12), 17447–17482. <https://doi.org/10.1007/s10639-025-13484-x>
- Algaraady, J., & Mahyoob, M. (2023). ChatGPT's Capabilities in Spotting and Analysing Writing Errors Experienced by EFL Learners. *Arab World English Journal*, 9, 3–17. <https://doi.org/10.24093/awej/call9.1>
- Arefian, M. H., Çomoğlu, I., & Dikilitaş, K. (2024). Understanding EFL teachers' experiences of ChatGPT-driven collaborative reflective practice through a community of practice

- lens. *Innovation in Language Learning and Teaching*, 1–16. <https://doi.org/10.1080/17501229.2024.2412769>
- Aure, P. A., & Cuenca, O. (2024). Fostering social-emotional learning through human-centered use of generative AI in business research education: an insider case study. *Journal of Research in Innovative Teaching & Learning*, 17(2), 168–181. <https://doi.org/10.1108/JRIT-03-2024-0076>
- Bankins, S., & Formosa, P. (2023). The Ethical Implications of Artificial Intelligence (AI) For Meaningful Work. *Journal of Business Ethics*, 185(4), 725–740. <https://doi.org/10.1007/s10551-023-05339-7>
- Bindayel, A., Elsayed, H., & Khan, M. U. (2025). *AI and Self Reflection* (pp. 289–302). [https://doi.org/10.1007/978-3-031-93412-4\\_17](https://doi.org/10.1007/978-3-031-93412-4_17)
- Bozkurt, A., Xiao, J., Farrow, R., Bai, J. Y. H., Nerantzi, C., Moore, S., Dron, J., Stracke, C. M., Singh, L., Crompton, H., Koutropoulos, A., Terentev, E., Pazurek, A., Nichols, M., Sidorkin, A. M., Costello, E., Watson, S., Mulligan, D., Honeychurch, S., ... Asino, T. I. (2024). The Manifesto for Teaching and Learning in a Time of Generative AI: A Critical Collective Stance to Better Navigate the Future. *Open Praxis*, 16(4), 487–513. <https://doi.org/10.55982/openpraxis.16.4.777>
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101. <https://doi.org/10.1191/1478088706qp063oa>
- Consadine, C. E., & Goodman, S. G. (2025). Becoming a Better Teacher Means Becoming a Better Learner: Metacognitive Abilities Predict Effective Learning Strategy Use by College Instructors. *College Teaching*, 1–9. <https://doi.org/10.1080/87567555.2025.2463894>
- Guo, X. (2025). Facilitator or thinking inhibitor: understanding the role of ChatGPT-generated written corrective feedback in language learning. *Interactive Learning Environments*, 33(5), 3526–3544. <https://doi.org/10.1080/10494820.2024.2445177>
- Hao, C., & Zhang, F. (2026). Understanding self-regulated grammar learning with LLM chatbot support: An epistemic network analysis of grammar learning strategy patterns. *System*, 136, 103879. <https://doi.org/10.1016/j.system.2025.103879>
- Iqbal, J., Aukhoon, M. A., & Parray, Z. A. (2025). Thriving minds, thriving workplaces: unleashing creativity through psychological wellbeing and psychological capital. *Journal of Organizational Effectiveness: People and Performance*, 12(4), 921–938. <https://doi.org/10.1108/JOEPP-01-2024-0025>
- Jones, S. (2023). The value of knowing: conscious and unconscious writing choices. *Language and Education*, 37(1), 71–87. <https://doi.org/10.1080/09500782.2022.2109421>
- Li, P.-H., Wu, T.-T., & Huang, Y.-M. (2025). Improving inquiry-based learning through automated ChatGPT-based inquiry prompt and behavioral image recognition. *Education and Information Technologies*. <https://doi.org/10.1007/s10639-025-13734-y>
- Liu, J., Sihes, A. J. Bin, & Lu, Y. (2025). How do generative artificial intelligence (AI) tools and large language models (LLMs) influence language learners' critical thinking in EFL education? A systematic review. *Smart Learning Environments*, 12(1), 48. <https://doi.org/10.1186/s40561-025-00406-0>
- Nafi'ah, J., & Faruq, D. J. (2025). Conceptualizing Deep Learning Approach in Primary Education: Integrating Mindful, Meaningful, and Joyful. *Journal of Educational Research and Practice*, 3(2), 225. <https://doi.org/10.70376/jerp.v3i2.384>

- Song, C., & Song, Y. (2023). Enhancing academic writing skills and motivation: assessing the efficacy of ChatGPT in AI-assisted language learning for EFL students. *Frontiers in Psychology, 14*. <https://doi.org/10.3389/fpsyg.2023.1260843>
- Srinivasan, V. (2022). AI & learning: A preferred future. *Computers and Education: Artificial Intelligence, 3*, 100062. <https://doi.org/10.1016/j.caeai.2022.100062>
- Tao, Y., & Yu, J. (2024). Cultural threads in writing mastery: a structural analysis of perfectionism, learning self-efficacy, and motivation as mediated by self-reflection in Chinese EFL learners. *BMC Psychology, 12*(1), 80. <https://doi.org/10.1186/s40359-024-01572-5>
- Wu, Q., & Xu, A. (2025). Poe or Gemini for fostering writing skills in Japanese upper-intermediate learners: Uncovering the consequences on positive emotions, boredom to write, academic self-efficacy and writing development. *British Educational Research Journal*. <https://doi.org/10.1002/berj.4119>
- Yusuf, A., Bello, S., Pervin, N., & Tukur, A. K. (2024). Implementing a proposed framework for enhancing critical thinking skills in synthesizing AI-generated texts. *Thinking Skills and Creativity, 53*, 101619. <https://doi.org/10.1016/j.tsc.2024.101619>