

Teacher Well-Being in the Age of Artificial Intelligence: Emerging Challenges and Pedagogical Implications

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ABSTRACT: The rapid expansion of artificial intelligence (AI), particularly generative technologies such as ChatGPT, has significantly transformed educational practices and reshaped traditional teaching roles. While AI offers various benefits, including administrative efficiency, personalized learning support, and improved access to educational resources, its integration also presents substantial psychological and professional challenges for educators. This study employs a narrative literature review approach to examine the relationship between AI integration and teacher well-being in higher education contexts. Relevant studies published between 2020 and 2025 were collected from academic databases including Google Scholar, Scopus, and ScienceDirect and analyzed thematically.

The review identifies several major issues associated with AI adoption in education, including technostress, cognitive overload, emotional exhaustion, professional identity tension, and concerns regarding academic integrity. The findings suggest that many teachers continue to experience uncertainty when adapting to rapidly evolving technological environments, particularly in contexts where institutional support and professional training remain insufficient. At the same time, the literature emphasizes that teachers continue to play a vital role in supporting critical thinking, ethical awareness, and human-centered learning experiences. This paper argues that sustainable AI integration should prioritize teacher well-being alongside technological innovation. Educational institutions should therefore provide continuous professional development, clearer ethical guidelines, and collaborative support systems to help educators navigate AI-mediated learning environments more effectively.

KEYWORDS: teacher well-being; artificial intelligence; technostress; professional identity; higher education

1. INTRODUCTION

The rapid proliferation of artificial intelligence (AI), particularly generative tools such as ChatGPT, is transforming the educational landscape and reshaping traditional pedagogical roles. As educators attempt to adapt to this transition, many experience uncertainty regarding their professional identity and the need for continuous skill development (Cambra-Fierro et al., 2024). Although AI integration may improve administrative efficiency and support personalized learning, it also introduces new psychological and professional challenges. Previous studies have highlighted increasing levels of technostress, anxiety related to technological adaptation, and concerns about professional obsolescence among educators (Delello et al., 2025; Klímová & Pikhart, 2025).

In addition, teachers are now frequently expected to integrate AI-driven technologies into their instructional practices while simultaneously maintaining existing pedagogical and administrative responsibilities (Hashem et al., 2023). This dual burden may contribute to cognitive overload and emotional exhaustion, particularly when educators are required to constantly update their technological competencies (Keeley, 2023; Zulkifli et al., 2026). The rapid pace of technological change can also disrupt teachers' sense of professional agency, as some educators struggle to reconcile human-centered teaching values with machine-generated instructional support (Dishari, 2026).

Furthermore, the growing reliance on AI systems may gradually shift the teacher's role toward a more supervisory or managerial position, potentially reducing the sense of autonomy traditionally associated with teaching (Ambady & V, 2026). Teachers may therefore face difficulties balancing the efficiency offered by AI-assisted instruction with the meaningful interpersonal interaction necessary for effective student support (KOPUZ, 2024). These challenges may become even more pronounced when AI-generated materials fail to align with local curricular requirements or institutional expectations, thereby increasing feelings of frustration and professional alienation among educators (FİLİZ et al., 2025).

Despite the growing body of research on AI in education, relatively limited attention has been paid to its impact on teacher well-being and professional identity. Much of the existing literature focuses primarily on student outcomes, learning performance, or

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technological effectiveness. Therefore, this paper aims to examine the emerging psychological and professional challenges associated with AI integration and discuss their pedagogical implications for higher education.

2. LITERATURE REVIEW

2.1 Teacher Well-being in Contemporary Education

Teacher well-being has become an increasingly important topic in educational research, particularly in the context of rapid technological and institutional change. Previous studies suggest that teachers frequently experience stress due to heavy workloads, administrative pressure, and the continuous need for professional adaptation (Grieba, 2026; Zhang & Cao, 2025). In recent years, the growing integration of digital technologies into teaching has added another layer of complexity to educators' professional lives.

Research has shown that teachers often struggle to balance instructional responsibilities with ongoing demands for technological upskilling and curriculum redesign (Trevisan et al., 2024). These pressures may negatively affect emotional well-being, professional confidence, and job satisfaction. Furthermore, the lack of institutional support frequently intensifies feelings of isolation and stress among educators, particularly during periods of rapid educational transformation (Walter, 2024).

The expansion of artificial intelligence in education has further complicated discussions surrounding teacher well-being. Some educators express concern that AI-driven systems may reduce teacher autonomy and challenge the traditional role of teachers as disciplinary experts (Hill, 2023; Li, 2025). Consequently, recent literature increasingly connects teacher well-being to issues of technological adaptation, emotional resilience, and professional identity.

2.2 AI Integration and Technostress

The increasing use of artificial intelligence in education has created both opportunities and challenges for teachers. Although AI tools may support personalized learning and reduce repetitive administrative tasks, their implementation also introduces new forms of psychological pressure (Bearman et al., 2022; Tammets & Ley, 2023). One of the most frequently discussed issues in recent literature is technostress, which refers to the stress associated with adapting to rapidly changing technologies (Falebita, 2024).

Teachers are often expected to integrate AI tools into their teaching practices despite receiving limited training or institutional guidance (Bond et al., 2024; Daher, 2025). This expectation may create frustration and anxiety, particularly among educators who lack confidence in their digital competencies. In many cases, teachers must independently explore unfamiliar technologies while simultaneously maintaining existing teaching and administrative responsibilities.

Several studies also suggest that AI integration may increase teachers' cognitive workload. Educators are required not only to understand how AI systems function but also to redesign classroom activities, assessments, and teaching materials to align with emerging technological environments (Park et al., 2023; Al-Mughairi & Bhaskar, 2024). As a result, the promised efficiency of AI does not always reduce workload in practice. Instead, some teachers experience greater emotional exhaustion due to the constant pressure to adapt to rapidly evolving digital systems (Mendiola & Carbajal-Degante, 2023).

2.3 Professional Identity and Teacher Autonomy

Another important issue identified in the literature concerns the relationship between AI integration and teachers' professional identity. Teaching has traditionally been viewed as a human-centered profession that relies heavily on interpersonal interaction, emotional support, and professional judgment. However, the growing presence of AI technologies has led some educators to question their role within increasingly automated learning environments (Ghamrawi et al., 2023).

Several studies suggest that teachers may feel their expertise is being challenged when AI-generated content appears capable of performing tasks traditionally associated with instructional authority (Jose et al., 2025; Watermeyer et al., 2024). This perception may reduce teachers' sense of autonomy and professional confidence. In some cases, educators fear becoming passive supervisors of technology rather than active facilitators of learning.

At the same time, researchers emphasize that AI should not be viewed as a replacement for teachers. Instead, educators continue to play an essential role in guiding critical thinking, providing emotional support, and contextualizing learning experiences (Chan & Lee, 2023; Berg, 2024). Therefore, maintaining teacher agency remains essential for sustainable and ethical AI integration in education.

2.4 Institutional Support and Professional Development

The literature consistently highlights the importance of institutional support in reducing teacher stress during technological transitions. Many educators report receiving insufficient training, unclear policy guidance, and limited opportunities for collaborative learning regarding AI integration (Nagaraj et al., 2023; Xia et al., 2024).

Without adequate institutional support, teachers are often forced to navigate ethical concerns, assessment redesign, and technological challenges independently. This situation may increase professional isolation and contribute to burnout (Hutson et al., 2022). In contrast, studies suggest that structured professional development programs and collaborative communities of practice can help teachers feel more confident and supported during periods of change (Gustilo et al., 2024).

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Researchers also argue that effective AI integration requires long-term institutional planning rather than short-term technological adoption (Nicola-Richmond et al., 2025). Universities should therefore provide ongoing training, accessible technical assistance, and clear ethical guidelines to support both teachers and students. Such initiatives may help reduce uncertainty and promote healthier approaches to educational innovation.

2.5 AI Ethics and Academic Integrity

Concerns regarding academic integrity and ethical AI use have become central themes in recent educational research. Teachers frequently express uncertainty about how to evaluate AI-assisted student work and maintain fairness in assessment practices (Kostka & Toncelli, 2023). The increasing difficulty of distinguishing between human-generated and AI-generated content may create additional stress for educators.

Some researchers argue that excessive focus on AI detection and surveillance may negatively affect classroom relationships by reducing trust between teachers and students (Perkins et al., 2024). Consequently, educators may experience emotional exhaustion from constantly monitoring potential misuse of generative technologies.

To address these concerns, scholars increasingly recommend shifting the focus from punishment toward critical AI literacy and ethical engagement (Chan, 2023; Eager & Brunton, 2023). Rather than banning AI entirely, institutions should encourage responsible and transparent use of these technologies while supporting teachers in redesigning assessments that promote critical thinking and authentic learning.

Overall, the literature suggests that ethical AI integration requires balanced approaches that protect academic integrity while preserving supportive and human-centered learning environments.

3. METHODOLOGY

This study employed a narrative literature review approach to explore the relationship between artificial intelligence (AI) and teacher well-being in educational settings. Relevant studies were collected from academic databases including Google Scholar, Scopus, and ScienceDirect. The review primarily focused on publications published between 2020 and 2025 to ensure relevance to the recent development of generative AI technologies such as ChatGPT.

The selection process prioritized peer-reviewed studies related to teacher well-being, technostress, AI integration, digital transformation, and educational technology. Studies focusing exclusively on student outcomes were excluded in order to maintain emphasis on teachers' professional and psychological experiences.

The collected literature was analyzed thematically. Key themes identified across the selected studies included technological anxiety, workload pressure, emotional exhaustion, professional identity, and pedagogical adaptation. These themes were synthesized to examine the emerging challenges associated with AI integration and their implications for teacher well-being in higher education contexts.

As a narrative review, this study does not aim to provide an exhaustive systematic analysis of all available literature. Instead, it seeks to offer a conceptual overview of current issues and pedagogical implications related to AI-driven educational transformation.

4. THEMATIC DISCUSSION: EMERGING CHALLENGES TO TEACHER WELL-BEING

4.1 Limited AI Literacy and Technostress

The reviewed literature indicates that limited AI literacy is one of the major factors contributing to teacher stress in AI-mediated educational environments. Although many educators recognize the potential benefits of generative AI for teaching and learning, they often report uncertainty regarding how these technologies should be effectively and ethically integrated into classroom practices (Mah & Groß, 2024). This uncertainty is particularly evident among teachers who lack prior experience with AI-related tools and digital pedagogies.

Several studies have linked this issue to increasing levels of technostress, which refers to the psychological strain associated with adapting to rapidly evolving technologies (Falebita, 2024). Instructors frequently experience frustration when attempting to evaluate AI-generated student work or determine appropriate boundaries for AI use in academic settings (Jose & Jose, 2024). The complexity and opacity of generative systems may further intensify feelings of anxiety, especially when educators feel inadequately prepared to interpret or monitor AI-generated outputs (Oğurlu & Mossholder, 2023).

In addition, the rapid implementation of AI technologies in higher education often occurs without sufficient institutional guidance or structured professional development. As a result, teachers are frequently expected to independently explore emerging tools while simultaneously maintaining their existing teaching responsibilities. This imbalance may contribute to cognitive overload and reduce teachers' confidence in their professional capabilities.

The findings also suggest that concerns regarding AI integration are not solely technical in nature. Many educators remain apprehensive about the possible impact of generative AI on academic integrity and the authenticity of student learning (Shofiah & Putera, 2024). The inability to clearly distinguish between human-produced and AI-generated content may lead teachers to adopt

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increasingly defensive or surveillance-oriented approaches to assessment (Perkins et al., 2024). Such practices can negatively affect classroom relationships and increase emotional exhaustion among educators.

Collectively, the literature suggests that insufficient AI literacy, combined with unclear institutional expectations, significantly contributes to teacher stress and professional uncertainty. These findings highlight the importance of ongoing professional development and institutional support in promoting healthier and more sustainable AI integration in education.

4.2 Professional Identity and Emotional Exhaustion

Another significant issue emerging from the reviewed literature is the impact of artificial intelligence on teachers' professional identity and emotional well-being. The rapid expansion of AI technologies has altered traditional perceptions of teaching, leading many educators to question their roles, expertise, and long-term relevance within increasingly technology-driven educational environments. While AI tools are often promoted as supportive instructional resources, some teachers perceive them as potential threats to their professional autonomy and pedagogical authority.

Several studies suggest that the growing dependence on automated systems may gradually shift teachers from active knowledge facilitators to supervisory or managerial roles (Watermeyer et al., 2024). This perceived transition can create tension between teachers' professional values and institutional expectations surrounding technological adoption. In particular, educators may experience discomfort when machine-generated responses appear to challenge or replace forms of human judgment traditionally associated with teaching expertise.

The literature also indicates that concerns regarding professional identity are closely connected to emotional exhaustion and burnout. Teachers are increasingly expected to adapt to new technologies while continuing to meet existing instructional, administrative, and assessment-related responsibilities. The continuous pressure to remain technologically competent may therefore contribute to fatigue, stress, and declining job satisfaction. In many cases, educators report feeling overwhelmed by the speed of technological change and the expectation to constantly update their digital skills.

Furthermore, the integration of AI into classroom practices may intensify feelings of uncertainty regarding the authenticity of teaching and learning processes. Some educators express concern that excessive reliance on generative technologies could weaken meaningful teacher-student interaction and reduce opportunities for human-centered learning experiences. This concern is particularly relevant in disciplines where emotional support, mentorship, and interpersonal communication are considered central components of effective pedagogy.

Another recurring issue identified in the literature is the emotional burden associated with monitoring AI-assisted academic work. Teachers often feel responsible for detecting inappropriate AI use while simultaneously attempting to preserve trust within the classroom environment. This dual responsibility may create additional psychological strain and contribute to emotional exhaustion over time. The pressure to maintain academic integrity in AI-mediated contexts can therefore transform teaching into a more surveillance-oriented process, reducing the relational and collaborative dimensions of education.

Despite these concerns, several scholars argue that AI does not necessarily diminish the importance of teachers. Instead, the literature increasingly emphasizes the need to redefine teachers' roles within digitally mediated learning environments. Rather than functioning solely as content providers, educators may take on more facilitative and mentorship-oriented responsibilities that focus on critical thinking, ethical guidance, and emotional support. Such a shift requires institutions to support teachers not only through technical training but also through initiatives that strengthen professional confidence and psychological well-being.

Overall, the reviewed studies suggest that the relationship between AI integration and teacher well-being extends beyond technical adaptation. The emotional and identity-related challenges associated with rapid technological change may significantly influence teachers' motivation, professional satisfaction, and long-term engagement with educational innovation. Consequently, sustainable AI integration should prioritize both pedagogical effectiveness and the preservation of teachers' professional agency and emotional health.

5. PEDAGOGICAL IMPLICATIONS

The findings of this review suggest that the successful integration of artificial intelligence in education depends not only on technological advancement but also on the extent to which institutions support teacher well-being. As AI technologies continue to reshape educational practices, universities and educational organizations must adopt more human-centered approaches that recognize the emotional, cognitive, and professional challenges experienced by educators (Cambra-Fierro et al., 2024; Delello et al., 2025).

One important implication involves the need for continuous professional development. Many teachers continue to report uncertainty regarding the practical and ethical use of AI technologies in classroom settings (Mah & Groß, 2024). Therefore, institutions should provide structured training programs that focus not only on technical competencies but also on pedagogical strategies for responsible AI integration. Such training may help reduce technostress and improve teachers' confidence in using AI-assisted tools (Bond et al., 2024; Walter, 2024).

In addition, institutions should establish clearer policy frameworks regarding academic integrity and ethical AI use. The absence of consistent guidelines often increases confusion and psychological pressure among educators who are required to independently

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determine acceptable forms of AI-assisted learning (Perkins et al., 2024). Clear institutional policies may therefore reduce uncertainty while promoting fairness and transparency in assessment practices. Scholars have also emphasized the importance of AI literacy and ethical awareness in helping teachers navigate rapidly evolving technological environments (Chan, 2023; Eager & Brunton, 2023).

The literature also highlights the importance of collaborative support systems. Teachers frequently experience professional isolation during periods of rapid technological transition, particularly when institutional expectations remain unclear. Creating communities of practice, peer-support networks, and interdisciplinary collaborations may help educators share experiences, exchange practical strategies, and collectively adapt to technological changes (Gustilo et al., 2024). Such collaborative environments may also reduce emotional exhaustion and strengthen professional resilience.

Another significant implication concerns the need to preserve teacher agency within AI-mediated learning environments. While AI technologies may improve efficiency, educational institutions should avoid positioning teachers as passive users of automated systems. Instead, teachers should remain active decision-makers who critically evaluate AI-generated content and adapt technological tools to meet specific pedagogical contexts and student needs (Watermeyer et al., 2024). Maintaining this balance is essential for protecting teachers' professional identity and instructional autonomy.

Finally, the findings suggest that AI integration should be approached as a long-term pedagogical transformation rather than a short-term technological trend. Institutions should therefore prioritize sustainable implementation strategies that consider both technological effectiveness and teacher well-being. Without adequate emotional, professional, and institutional support, the rapid expansion of AI in education may increase burnout and negatively affect the overall quality of teaching and learning (Zhang & Cao, 2025; Zulkifli et al., 2026).

6. CONCLUSION

The rapid development of artificial intelligence has significantly transformed educational environments and reshaped traditional teaching practices. Although AI technologies offer various benefits, including administrative efficiency, personalized learning opportunities, and enhanced access to educational resources, their integration also introduces considerable psychological and professional challenges for educators.

This review highlights several major issues associated with AI integration, including technostress, cognitive overload, professional identity tension, emotional exhaustion, and concerns regarding academic integrity. The findings suggest that many teachers continue to experience uncertainty when adapting to rapidly evolving technological environments, particularly in contexts where institutional support and professional training remain insufficient.

At the same time, the literature emphasizes that teachers continue to play an essential role within AI-mediated educational systems. Rather than replacing educators, artificial intelligence should function as a supportive tool that complements human-centered teaching practices. Maintaining teacher agency, emotional well-being, and professional autonomy therefore remains critical for sustainable educational innovation.

Ultimately, successful AI integration requires balanced approaches that combine technological advancement with strong institutional support, ethical guidance, and continuous professional development. Educational institutions should recognize that teacher well-being is not a secondary issue but a central component of effective and sustainable pedagogical transformation. Future research may further explore long-term strategies for supporting educators as they navigate the evolving relationship between artificial intelligence and contemporary teaching practices.

REFERENCES

- 1) Al-Mughairi, H., & Bhaskar, P. (2024). Exploring the factors affecting the adoption AI techniques in higher education: Insights from teachers' perspectives on ChatGPT. *Journal of Research in Innovative Teaching & Learning*. <https://doi.org/10.1108/jrit-09-2023-0129>
- 2) Ambady, A., & V, T. K. (2026). Persona pedagogica in crisis: Are educators becoming data custodians in the age of AI? *Frontiers in Artificial Intelligence*, 8, 1743016. <https://doi.org/10.3389/frai.2025.1743016>
- 3) Bearman, M., Ryan, J., & Ajjawi, R. (2022). Discourses of artificial intelligence in higher education: A critical literature review. *Higher Education*, 86(2), 369–385. <https://doi.org/10.1007/s10734-022-00937-2>
- 4) Berg, G. van den. (2024). Generative AI and educators: Partnering in using open digital content for transforming education. *Open Praxis*, 16(2), 130–141. <https://doi.org/10.55982/openpraxis.16.2.640>
- 5) Bond, M., Khosravi, H., Laat, M. de, Bergdahl, N., Negrea, V., Oxley, E., Pham, P., Chong, S. W., & Siemens, G. (2024). A meta systematic review of artificial intelligence in higher education: A call for increased ethics, collaboration, and rigour. *International Journal of Educational Technology in Higher Education*, 21(1). <https://doi.org/10.1186/s41239-023-00436-z>

- 6) Cambra-Fierro, J., Blasco, M. F., López-Pérez, M.-E., & Trifu, A. (2024). ChatGPT adoption and its influence on faculty well-being: An empirical research in higher education. *Education and Information Technologies*. <https://doi.org/10.1007/s10639-024-12871-0>
- 7) Chan, C. K. Y. (2023). A comprehensive AI policy education framework for university teaching and learning. *International Journal of Educational Technology in Higher Education*, 20(1). <https://doi.org/10.1186/s41239-023-00408-3>
- 8) 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). <https://doi.org/10.1186/s40561-023-00269-3>
- 9) Daher, R. F. (2025). Integrating AI literacy into teacher education: A critical perspective paper. *Discover Artificial Intelligence*, 5(1). <https://doi.org/10.1007/s44163-025-00475-7>
- 10) Delello, J. A., Sung, W., Mokhtari, K., Hebert, J., Bronson, A., & Giuseppe, T. D. (2025). AI in the classroom: Insights from educators on usage, challenges, and mental health. *Education Sciences*, 15(2), 113. <https://doi.org/10.3390/educsci15020113>
- 11) Dishari, S. (2026). Teaching in the age of generative AI: A qualitative analysis of faculty identity, emotion, and assessment concerns. *Journal of Artificial Intelligence and Technology*. <https://doi.org/10.37965/jait.2025.0941>
- 12) Eager, B., & Brunton, R. (2023). Prompting higher education towards AI-augmented teaching and learning practice. *Journal of University Teaching and Learning Practice*, 20(5). <https://doi.org/10.53761/1.20.5.02>
- 13) Falebita, O. S. (2024). Assessing the relationship between anxiety and the adoption of artificial intelligence tools among mathematics preservice teachers. *Interdisciplinary Journal of Education Research*, 6, 1–13. <https://doi.org/10.38140/ijer-2024.vol6.20>
- 14) FİLİZ, O., Kaya, M. H., & Adıgüzel, T. (2025). Teachers and AI: Understanding the factors influencing AI integration in K-12 education. *Education and Information Technologies*, 30(13), 17931–17967. <https://doi.org/10.1007/s10639-025-13463-2>
- 15) Ghamrawi, N., Shal, T., & Ghamrawi, N. A. R. (2023). Exploring the impact of AI on teacher leadership: Regressing or expanding? *Education and Information Technologies*, 29(7), 8415–8433. <https://doi.org/10.1007/s10639-023-12174-w>
- 16) Gribiea, A. M. (2026). Enhancing teachers' technological self-efficacy and well-being: A qualitative study of an "AI for Beginners" professional development program. *Education Sciences*, 16(2), 225. <https://doi.org/10.3390/educsci16020225>
- 17) Gustilo, L., Ong, E., & Lapinid, M. R. (2024). Algorithmically-driven writing and academic integrity: Exploring educators' practices, perceptions, and policies in AI era. *International Journal for Educational Integrity*, 20(1). <https://doi.org/10.1007/s40979-024-00153-8>
- 18) Hashem, R., Ali, N., Zein, F. E., Fidalgo, P., & Khurma, O. A. (2023). AI to the rescue: Exploring the potential of ChatGPT as a teacher ally for workload relief and burnout prevention. *Research and Practice in Technology Enhanced Learning*, 19, 23. <https://doi.org/10.58459/rptel.2024.19023>
- 19) Hill, R. (2023). AI as fad or AI as lasting? Priorities for college faculty instructional development for generative artificial intelligence. *Irish Journal of Technology Enhanced Learning*, 7(2), 136–145. <https://doi.org/10.22554/ijtel.v7i2.154>
- 20) Hutson, J., Jeevanjee, T., Graaf, V. V., Lively, J., Weber, J., Weir, G., Arnone, K., Carnes, G., Vosevich, K., Plate, D., Leary, M., & Edele, S. (2022). Artificial intelligence and the disruption of higher education: Strategies for integrations across disciplines. *Creative Education*, 13(12), 3953–3980. <https://doi.org/10.4236/ce.2022.1312253>
- 21) Jose, B., Cleetus, A., Joseph, B., Joseph, L., Jose, B., & John, A. (2025). Epistemic authority and generative AI in learning spaces: Rethinking knowledge in the algorithmic age. *Frontiers in Education*, 10. <https://doi.org/10.3389/feduc.2025.1647687>
- 22) Jose, J., & Jose, B. J. (2024). Educators' academic insights on artificial intelligence: Challenges and opportunities. *The Electronic Journal of E-Learning*. <https://doi.org/10.34190/ejel.21.5.3272>
- 23) Keeley, K. (2023). AI-assisted teacher wellness. In *Advances in educational technologies and instructional design book series* (pp. 201–216). IGI Global. <https://doi.org/10.4018/979-8-3693-0074-9.ch008>
- 24) Klímová, B., & Pikhart, M. (2025). Exploring the effects of artificial intelligence on student and academic well-being in higher education: A mini-review. *Frontiers in Psychology*, 16, 1498132. <https://doi.org/10.3389/fpsyg.2025.1498132>
- 25) KOPUZ, E. (2024). English language teachers' insights on the influence of ChatGPT on professional well-being. *Journal of Educational Studies and Multidisciplinary Approaches*, 4(2). <https://doi.org/10.51383/jesma.2024.107>
- 26) Kostka, I., & Toncelli, R. (2023). Exploring applications of ChatGPT to English language teaching: Opportunities, challenges, and recommendations. *TESL-EJ*, 27(3). <https://doi.org/10.55593/ej.27107int>
- 27) Li, H. (2025). What kind of teacher should we become: Identity–role consistency and authenticity. *Frontiers in Education*, 10. <https://doi.org/10.3389/feduc.2025.1650873>

- 28) Mah, D.-K., & Groß, N. (2024). Artificial intelligence in higher education: Exploring faculty use, self-efficacy, distinct profiles, and professional development needs. *International Journal of Educational Technology in Higher Education*, 21(1). <https://doi.org/10.1186/s41239-024-00490-1>
- 29) Mendiola, M. S., & Carbajal-Degante, E. (2023). La inteligencia artificial generativa y la educación universitaria. *Perfiles Educativos*, 45, 70–86. <https://doi.org/10.22201/iisue.24486167e.2023.especial.61692>
- 30) Nagaraj, B., Kalaivani, A., R, S. B., Akila, S., Sachdev, H. K., & Kumar, N. K. S. (2023). The emerging role of artificial intelligence in STEM higher education: A critical review. *International Research Journal of Multidisciplinary Technovation*, 1–19. <https://doi.org/10.54392/irjmt2351>
- 31) Nicola-Richmond, K., Dawson, P., Helen, P., & Macfarlane, S. (2025). It takes a village: Program-wide approaches to redesigning assessment in a time of generative artificial intelligence (GenAI). *Journal of University Teaching and Learning Practice*. <https://doi.org/10.53761/zpp2ja61>
- 32) Oğurlu, Ü., & Mossholder, J. (2023). The perception of ChatGPT among educators: Preliminary findings. *Research in Social Sciences and Technology*, 8(4), 196–215. <https://doi.org/10.46303/ressat.2023.39>
- 33) Park, J., Teo, T. W., Teo, A., Chang, J., Huang, J., & Koo, S. (2023). Integrating artificial intelligence into science lessons: Teachers' experiences and views. *International Journal of STEM Education*, 10(1). <https://doi.org/10.1186/s40594-023-00454-3>
- 34) Perkins, M., Furze, L., Roe, J., & MacVaugh, J. (2024). The artificial intelligence assessment scale (AIAS): A framework for ethical integration of generative AI in educational assessment. *Journal of University Teaching and Learning Practice*, 21(6). <https://doi.org/10.53761/q3azde36>
- 35) Shofiah, N., & Putera, Z. F. (2024). Examining the user experience of artificial intelligence tools in academic writing: The perceptions lecturers practices. *Research Square*. <https://doi.org/10.21203/rs.3.rs-3871916/v1>
- 36) Tammets, K., & Ley, T. (2023). Integrating AI tools in teacher professional learning: A conceptual model and illustrative case. *Frontiers in Artificial Intelligence*, 6. <https://doi.org/10.3389/frai.2023.1255089>
- 37) Trevisan, O., Christensen, R., Drossel, K., Friesen, S., Forkosh-Baruch, A., & Phillips, M. (2024). Drivers of digital realities for ongoing teacher professional learning. *Technology, Knowledge and Learning*, 29(4), 1851–1868. <https://doi.org/10.1007/s10758-024-09771-0>
- 38) Walter, Y. (2024). Embracing the future of artificial intelligence in the classroom: The relevance of AI literacy, prompt engineering, and critical thinking in modern education. *International Journal of Educational Technology in Higher Education*, 21(1). <https://doi.org/10.1186/s41239-024-00448-3>
- 39) Watermeyer, R., Lanclos, D., Phipps, L., Shapiro, H. S., Guizzo, D., & Knight, C. (2024). Academics' weak(ening) resistance to generative AI: The cause and cost of prestige? *Postdigital Science and Education*. <https://doi.org/10.1007/s42438-024-00524-x>
- 40) Xia, Q., Weng, X., Ouyang, F., Lin, T., & Chiu, T. K. F. (2024). A scoping review on how generative artificial intelligence transforms assessment in higher education. *International Journal of Educational Technology in Higher Education*, 21(1). <https://doi.org/10.1186/s41239-024-00468-z>
- 41) Zhang, C., & Villanueva, L. E. (2023). Generative artificial intelligence preparedness and technological competence. *International Journal of Education and Humanities*, 11(2), 164–170. <https://doi.org/10.54097/ijeh.v11i2.13753>
- 42) Zhang, H., & Cao, J. (2025). From digital disruption to mental health: The impact of AI-induced educational anxiety on teacher well-being in the era of smart education. *BMC Public Health*, 25(1), 4010. <https://doi.org/10.1186/s12889-025-25372-7>
- 43) Zulkifli, Z., Taha, M., & Baharuddin, M. K. (2026). Digital competence, artificial intelligence integration, and teacher wellbeing in Malaysia: A review. *International Journal of Academic Research in Progressive Education and Development*, 15(1). <https://doi.org/10.6007/ijarped/v15-i1/27239>



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