

GENERATIVE AI, CAREER RESILIENCE, AND SUSTAINABLE CAREERS AMONG GENERATION Z EDUCATORS: A LITERATURE REVIEW

Rahmawati Prihastuty^{1,2}, Corry Yohana³, Despinur Dara³

¹Doctoral Program in Management Science, Faculty of Economics and Business,
Universitas Negeri Jakarta, Indonesia

²Department of Psychology, Faculty of Education and Psychology,
Universitas Negeri Semarang, Indonesia

³Faculty of Economics and Business, Universitas Negeri Jakarta, Indonesia

*Corresponding Author: rahmawati_1717925052@mhs.unj.ac.id

Abstract. Generative artificial intelligence is increasingly reshaping educational work by transforming how teachers design instruction, provide feedback, manage administrative tasks, and construct professional expertise. However, existing discussions remain largely centered on pedagogical efficiency and ethical concerns, while the career implications of generative AI for younger educators remain insufficiently theorized. This study aims to review and synthesize the relationship between generative AI, career resilience, and sustainable careers among Generation Z educators. Using a literature review approach, the study examined scholarly works published between 2020 and 2026 across education, career psychology, teacher professional development, and educational technology. The review finds that generative AI can support Generation Z educators by reducing routine workload, expanding instructional creativity, strengthening access to professional learning, and improving career adaptability. However, these benefits are conditional on AI literacy, digital competence, psychological resources, professional agency, and institutional support. The study further shows that career resilience serves as a critical mechanism by which young educators interpret AI-related disruption, manage uncertainty, and translate technological change into sustainable professional growth. The originality of this study lies in integrating three bodies of literature that are often examined separately: generative AI in education, career resilience, and sustainable career development. The study contributes theoretically by proposing an integrative framework linking technological exposure, psychological adaptation, and career sustainability, while offering practical implications for AI literacy training, mentoring, ethical governance, workload protection, and human-centered professional development.

Keywords: Generative AI, Career Resilience, Sustainable Careers, Generation Z Educator

INTRODUCTION

Education is currently experiencing a profound transformation as intelligent technologies become increasingly embedded in teaching, learning, assessment, and institutional management. Among these technologies, generative artificial intelligence has attracted particular attention for its ability to produce texts, explanations, learning materials, feedback, and other educational resources in ways that were previously difficult to automate at scale. Recent reviews and scholarly commentaries suggest that generative AI is no longer a peripheral innovation but an emerging force reshaping curriculum design, pedagogical practice, assessment systems, and broader educational governance (Hong, 2026; Jiang, 2025; Alshahrani et al., 2024). This shift has created new possibilities for educational institutions, while also raising important questions about how

teachers, students, and administrators should respond to the changing nature of knowledge production and professional practice.

Generative models, including ChatGPT and other large language models, have moved rapidly from experimental technologies into everyday educational use. Their adoption across higher education and K–12 settings has encouraged new approaches to personalized content generation, automated formative feedback, adaptive assessment, and administrative support such as grading, scheduling, and learning analytics. These functions can improve teacher efficiency and create opportunities for more differentiated forms of instruction when they are aligned with sound pedagogical principles (Alshahrani et al., 2024; Younas et al., 2026; Rajkumar, 2024; Ng et al., 2023). Since 2022, empirical and narrative studies have increasingly documented the growing visibility of generative AI in classrooms, particularly in relation to lesson preparation, prompt-based material development, learner personalization, and time-saving administrative practices. When used thoughtfully, these applications may support instructional innovation and scalable personalization without necessarily reducing the centrality of human judgment in education (Alshahrani et al., 2024; Metin & Cetin, 2026; Ng et al., 2023; Rajkumar, 2024).

However, the educational significance of generative AI extends beyond technical efficiency. Scholars have argued that its integration is also reshaping teachers' professional identities, responsibilities, and daily practices. As AI systems increasingly assist with routine design, feedback, and assessment tasks, teachers are expected to assume more complex roles as mediators, curators, ethical decision-makers, and learning designers. Studies on teacher experiences indicate that generative AI can foster professional empowerment, improve productivity, and open new pedagogical possibilities, but these benefits depend strongly on adequate training, institutional support, and the specific conditions in which teachers work (Karan & Angadi, 2023; KIM et al., 2025; Rajkumar, 2024). In this sense, the value of generative AI is not determined solely by the sophistication of the technology itself, but by the preparedness of educators and institutions to integrate it responsibly.

At the same time, the rapid expansion of generative AI in education has introduced a range of ethical, pedagogical, and organizational challenges. The literature repeatedly highlights concerns related to academic integrity, algorithmic bias, data privacy, learner overdependence, teacher resistance, and uneven levels of digital confidence. These concerns are compounded by institutional readiness gaps, particularly in infrastructure, policy development, professional learning, and clear guidance for ethical classroom use (Alshahrani et al., 2024; Shang, 2025; Angadi & Karan, 2026; Goyal et al., 2025; Tabari, 2026; Nkedishu & Vinella, 2024). Without careful governance and inclusive capacity-building, the adoption of generative AI may reproduce or even intensify existing inequalities between schools, teachers, and learners with different levels of access, competence, and institutional support.

Taken together, current studies suggest that generative AI offers meaningful potential to enhance pedagogy, improve educational efficiency, and expand personalized learning opportunities. Nevertheless, its successful integration requires more than technical adoption. It demands intentional governance, AI literacy, ethical awareness, and context-sensitive professional development that enables educators to use these tools critically rather than passively (Alshahrani et al., 2024; Jiang, 2025; Coman et al., 2026). These issues are particularly important for Generation Z educators, who are entering or developing their careers in an educational environment increasingly shaped by digital disruption, automation, and shifting expectations of professional competence.

For Generation Z educators, generative AI may serve as both a resource and a source of career pressure. On the one hand, familiarity with digital technologies can help younger educators adapt to AI-supported teaching environments and explore innovative instructional practices. On the other hand, the pace of technological change may require continuous learning, emotional adaptability, ethical sensitivity, and resilience in managing uncertainty. This condition makes career resilience a critical construct for understanding how young educators sustain professional growth amid technological transformation. Career resilience refers to the capacity to adapt, recover, and remain professionally engaged in the face of disruption, ambiguity, or changing work demands. In the context of generative AI, career resilience may influence whether educators perceive AI as a threat to professional identity or as a tool that can strengthen their teaching practice and long-term career development.

Despite the growing body of literature on generative AI in education, existing studies have primarily emphasized its pedagogical applications, ethical implications, and institutional challenges. Less attention has been given to how generative AI intersects with career resilience and sustainable career development, particularly among Generation Z educators. This gap is important because the sustainability of teaching careers in the digital era cannot be understood only through technological competence or institutional readiness. It also requires attention to educators' psychological resources, adaptive capacities, professional identity, and ability to maintain meaningful, healthy, and productive careers over time. Therefore, a literature review that connects generative AI, career resilience, and sustainable careers among Generation Z educators is needed to clarify the current state of knowledge and identify directions for future research.

This article aims to review and synthesize existing literature on the relationship between generative AI, career resilience, and sustainable careers among Generation Z educators. Specifically, it seeks to examine how generative AI is transforming educational work, how career resilience may help educators respond to technological disruption, and how these dynamics contribute to the development of sustainable careers. The review is expected to offer conceptual insights for scholars, educators, and policymakers by highlighting the importance of integrating technological innovation with human-centered professional development. In doing so, this study contributes to the literature by positioning generative AI not merely as an instructional tool but as a transformative force that has implications for the future resilience and sustainability of educators' careers.

In this review, Generation Z refers to individuals born between approximately 1997 and 2012, following the classification proposed by the Pew Research Center. Within educational settings, Generation Z educators primarily comprise pre-service teachers, novice teachers, and early-career educators who are entering or establishing their professional careers during a period characterized by rapid digital transformation and widespread adoption of generative AI. Both technological innovation and the demands of continuous professional adaptation therefore shape their career experiences.

METHODS

Research Design

This study employed a structured literature review to synthesize evidence on generative artificial intelligence, career resilience, and sustainable careers among Generation Z educators. A structured review was appropriate because evidence on these interrelated constructs remains fragmented across education, career psychology, and educational technology research. The review aimed to integrate current evidence, identify emerging conceptual patterns, and inform future

research. To ensure methodological transparency, the review was conducted and reported in accordance with the PRISMA 2020 reporting guidelines, while recognizing that it represents a structured literature review rather than a full systematic review.

Search Strategy

The literature search was conducted between April and May 2026 using Scopus, Web of Science, ERIC, PsycINFO, ProQuest, and Google Scholar, which collectively provide broad coverage of education, psychology, educational technology, and career research. Studies published between 2020 and 2026 were included to capture recent developments in generative AI and related career constructs. Boolean operators were used to combine keywords related to generative AI, educators, Generation Z, career resilience, career adaptability, and sustainable careers. Search syntax was adapted to each database while maintaining conceptual consistency. Key search terms included *"generative AI," "ChatGPT," "large language model," "AI tools," "teacher," "educator," "pre-service teacher," "teacher education," "early-career teacher," "Generation Z," "Gen Z," "career resilience," "career adaptability," "career sustainability,"* and *"sustainable career."* An example of the search string is presented below: ("generative AI" OR ChatGPT OR "large language model" OR "artificial intelligence" OR "AI tools") AND (teacher* OR educator* OR "pre-service teacher" OR "teacher education" OR "early-career teacher" OR lecturer*) AND ("career resilience" OR "career adaptability" OR "career sustainability" OR "sustainable career*" OR "career development") AND ("Generation Z" OR "Gen Z" OR "young teacher*" OR "young educator*" OR "early-career educator*")

Eligibility Criteria

Predefined eligibility criteria guided the selection of studies to ensure that the reviewed literature was relevant to the objectives of this study. Studies were evaluated based on publication characteristics, research context, topical relevance, and accessibility. The inclusion and exclusion criteria applied during the screening process are presented in Table 1.

Table 1. Inclusion and Exclusion Criteria

Inclusion Criteria	Exclusion Criteria
Peer-reviewed journal articles	Editorials, conference abstracts, book reviews, commentaries, dissertations, and theses
Published in English	Non-English publications
Published between 2020 and 2026	Publications before 2020
Studies conducted in educational contexts (e.g., teachers, educators, pre-service teachers, and teacher education)	Studies focusing exclusively on technical aspects of AI without educational or career relevance
Studies addressing generative AI and at least one career-related construct (e.g., career resilience, career adaptability, career sustainability, or career development)	Studies unrelated to the objectives of the review
Full-text articles available	Abstract-only publications or inaccessible full texts

Because empirical evidence focusing specifically on Generation Z educators remains limited, conceptually relevant studies involving broader teacher populations or related professional groups were also included as supporting evidence during the theoretical synthesis. These studies were used to strengthen conceptual interpretation rather than to generalize findings directly to Generation Z educators.

Because empirical studies focusing specifically on Generation Z educators remain limited, this review distinguished between two categories of evidence during the synthesis process. Direct evidence was defined as studies explicitly involving Generation Z educators, pre-service teachers, novice teachers, or early-career educators whose characteristics closely aligned with the review population. Supporting evidence included studies involving broader teacher populations or related professional groups that provided relevant conceptual or empirical insights into generative AI, career resilience, AI literacy, psychological resources, or sustainable careers. Supporting evidence was used to strengthen theoretical interpretation rather than to generalize findings directly to Generation Z educators.

Study Selection Process

Retrieved records were screened through four sequential stages following the PRISMA 2020 reporting framework. A total of 1,248 records were initially identified from the selected databases. After removing 318 duplicate records, 930 records remained for title screening. Following title and abstract screening, 142 full-text articles were assessed for eligibility against the predefined inclusion and exclusion criteria. Of these, 42 studies met all eligibility criteria. They were included in the final synthesis, while the remaining studies were excluded because they did not satisfy the review objectives or eligibility criteria. The complete study selection process and the number of records retained at each stage are presented in Figure 1.

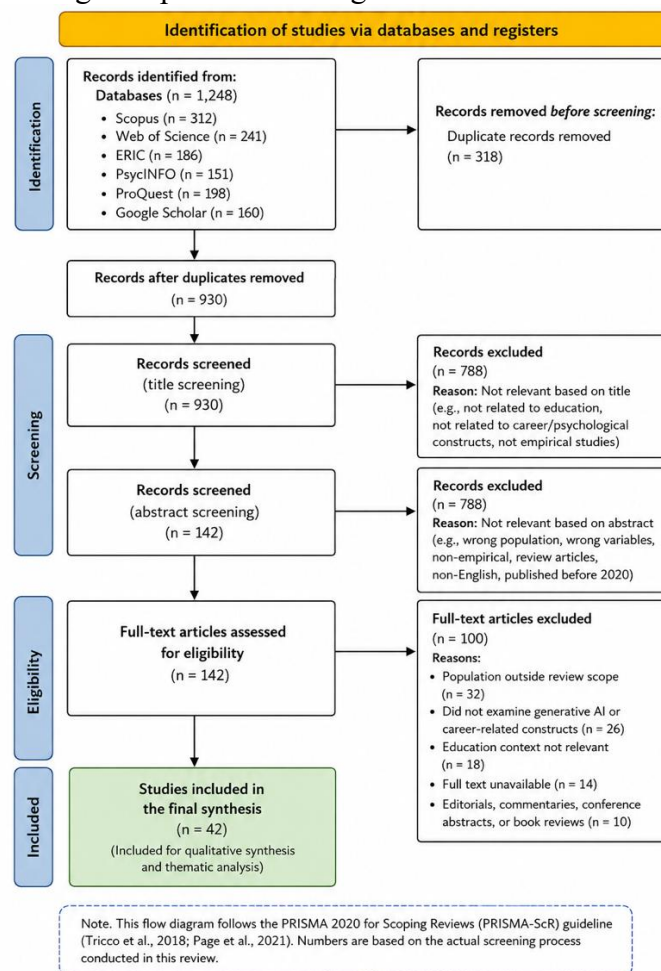


Figure 1. PRISMA 2020 Flow Diagram for Scoping-Oriented Systematic Literature

Quality Appraisal

Each included study was appraised based on three criteria: (1) relevance to the objectives of this review, (2) methodological quality, and (3) conceptual contribution to understanding the relationships among generative AI, career resilience, and sustainable careers in educational contexts. Rather than assigning numerical quality scores, the appraisal was used to evaluate each study's credibility and theoretical relevance during the synthesis process. Studies providing stronger empirical or conceptual evidence received greater emphasis in the interpretation of findings.

Data Extraction

Relevant information was extracted from each included study using a standardized data extraction framework. Extracted information included the author(s), publication year, research context, educational setting or population, type of generative AI application, psychological factors, career-related constructs, principal findings, and implications for Generation Z educators. These data were systematically compared to identify similarities, differences, and each study's contribution to the review's objectives.

The extracted studies were compared according to their research context, population, AI-related focus, career-related constructs, and principal findings. These characteristics informed the thematic synthesis and the development of the conceptual framework presented in this review.

Data Synthesis

The extracted evidence was synthesized using thematic analysis. The selected studies were reviewed repeatedly to identify recurring concepts, patterns, and theoretical arguments. Similar findings were subsequently organized into broader themes and interpreted in relation to the objectives of the review. The synthesis generated several overarching themes, including generative AI adoption in teaching; AI literacy and digital competence; career anxiety and professional uncertainty; career resilience and adaptability; teacher identity and professional agency; institutional support and professional development; and sustainable career pathways for Generation Z educators. Given the heterogeneous nature of the available evidence, the synthesis was intended to develop an integrated conceptual understanding rather than establish causal relationships among the reviewed constructs.

RESULTS AND DISCUSSION

Generative AI as a Transformative Force in Teaching Work

Generative AI (GenAI) is reshaping teachers' work by transforming instructional planning, assessment, feedback, and routine administrative tasks. Applications such as ChatGPT and other large language models enable educators to generate lesson plans, learning resources, formative assessments, and personalized instructional materials more efficiently. These capabilities reduce repetitive workloads and create greater opportunities for teachers to focus on learner support, pedagogical decision-making, and creative instructional design (Hashem et al., 2023; Kalenda et al., 2024; Kotsis, 2024; Hartley et al., 2024; Coşgun, 2025).

Beyond improving efficiency, GenAI expands pedagogical possibilities through adaptive learning materials, multimodal content, differentiated instruction, and rapid idea generation. Studies consistently report that AI-assisted lesson planning can enrich instructional creativity and support more personalized learning experiences. However, these benefits depend on teachers' ability to critically evaluate, adapt, and contextualize AI-generated outputs rather than adopting them uncritically (Costa et al., 2024; Alhazzani, 2024; Yalçınalp et al., 2024). Consequently,

GenAI should be understood as an instructional assistant that complements rather than replaces professional expertise.

The literature also highlights important challenges associated with GenAI adoption. AI-generated materials may contain factual inaccuracies, contextual mismatches, algorithmic bias, repetitive content, or pedagogically inappropriate recommendations. Effective use, therefore, requires AI literacy that extends beyond operational competence to include critical evaluation, ethical reasoning, privacy awareness, authorship considerations, and alignment with curricular objectives (Lin et al., 2022; Subbiah et al., 2024; Kotsis, 2024). As a result, teachers' roles are shifting from content producers toward pedagogical mediators who interpret, validate, and refine AI-generated knowledge.

Importantly, the effects of GenAI are not uniform across educators. While some teachers experience greater productivity and instructional innovation, others face additional cognitive demands associated with prompt engineering, output verification, ethical decision-making, and continuous technological adaptation (Hashem et al., 2023; Shang, 2025; Nguyen et al., 2023). These dynamics are particularly relevant for Generation Z educators. Although they generally demonstrate higher digital familiarity, they also encounter growing expectations to master emerging AI technologies while simultaneously developing pedagogical expertise and professional identity. Consequently, technological familiarity alone does not guarantee meaningful AI integration.

Overall, the literature suggests that the career benefits of GenAI depend less on technology itself than on educators' capacity to integrate it critically within supportive institutional environments. AI literacy, professional development, ethical governance, and organizational support collectively determine whether GenAI functions as a catalyst for instructional innovation and sustainable careers or becomes a source of professional uncertainty and increased workload (Costa et al., 2024; Hashem et al., 2023; Lin et al., 2022).

Psychological Factors Shaping Career Resilience

Career resilience among educators is shaped by psychological resources that influence how individuals interpret and respond to technological disruption. For Generation Z educators, resilience extends beyond digital proficiency to encompass self-efficacy, career adaptability, growth mindset, emotional regulation, and professional identity. These interrelated resources enable teachers to navigate uncertainty, sustain motivation, and remain engaged in AI-mediated educational environments. Evidence suggests that self-efficacy and career adaptability are positively associated with employability, work engagement, and the capacity to adjust to evolving pedagogical demands, while digital information literacy further strengthens adaptive responses to technological change (Hashem et al., 2023; Kalenda et al., 2024; Kotsis, 2024).

Growth mindset reinforces these adaptive capacities by encouraging educators to perceive technological change as an opportunity for professional learning rather than a threat to occupational relevance. Studies indicate that teachers with stronger growth-oriented beliefs are more likely to develop positive attitudes toward generative AI, engage in continuous upskilling, and maintain higher levels of well-being during educational transformation (Coşgun, 2025; Hashem et al., 2023). Likewise, a well-developed professional identity provides a stable sense of purpose that encourages long-term commitment and facilitates the integration of AI into teaching without undermining professional values (Nam & Giang, 2023; Yalçınalp et al., 2024).

Emotional regulation further strengthens career resilience by enabling educators to manage anxiety, uncertainty, and role-related stress associated with rapid technological change. Conversely, fragile professional identity and career anxiety may increase perceptions of AI as a

threat to employment, professional status, or pedagogical authority. Evidence suggests that resilience-oriented interventions, professional identity development, and supportive learning environments reduce these threat perceptions while encouraging adaptive responses such as reskilling and lifelong learning (Alhazzani, 2024; Costa et al., 2024; Yalçınalp et al., 2024; Subbiah et al., 2024).

Overall, the literature suggests that career resilience emerges from the interaction between technological competence and psychological resources rather than from AI familiarity alone. AI literacy provides the technical foundation, whereas self-efficacy, adaptability, growth mindset, emotional regulation, and professional identity determine whether educators interpret generative AI as a catalyst for professional growth or a source of career uncertainty. Accordingly, institutional initiatives such as AI literacy programs, mentoring, and psychosocial support are essential for transforming Generation Z educators' digital readiness into sustainable career resilience (Hartley et al., 2024; Hashem et al., 2023; Kotsis, 2024).

Generative AI, Teacher Identity, and Professional Agency

The integration of generative AI is reshaping teacher identity by shifting educators' roles from knowledge transmitters to learning designers, facilitators, and ethical decision-makers. As routine instructional tasks become increasingly automated, teachers are expected to exercise greater pedagogical judgment, creativity, and critical reflection in designing meaningful learning experiences. Consequently, effective AI integration requires not only technical competence but also an adaptive professional identity that enables educators to preserve the human, relational, and ethical dimensions of teaching (Admiraal & Tigelaar, 2026; Lu et al., 2025; Mannekote et al., 2024).

Professional agency is central to this transformation because teachers remain responsible for determining how AI is used within educational practice. Human-in-the-loop and constructivist perspectives emphasize that educators must critically evaluate AI-generated outputs, contextualize them to learners' needs, and guide the co-construction of knowledge rather than relying on automated recommendations. In this sense, AI functions as a pedagogical partner whose educational value depends on teachers' interpretive authority and professional decision-making. Institutional conditions—including supportive leadership, organizational learning, and opportunities for continuous professional development—further strengthen teachers' capacity to exercise agency in AI-mediated environments (Pavlović, 2025; Potter et al., 2023; Berkovich, 2026).

At the same time, generative AI creates important identity-related challenges. When institutions prioritize productivity over pedagogy, teachers may be reduced to technology operators rather than autonomous professionals. Excessive reliance on AI can weaken professional judgment, blur role boundaries, and undermine the relational aspects of teaching that remain uniquely human. Accordingly, scholars argue that AI integration should preserve core educational values, including teacher–student relationships, formative assessment, ethical responsibility, and curricular intentionality. AI-supported instruction, therefore, requires reflective practice, clear institutional guidance, and critical AI literacy to ensure that technological efficiency does not replace pedagogical autonomy (Admiraal & Tigelaar, 2026; Lu et al., 2025; Concannon et al., 2023; Lin, 2025).

Overall, the literature suggests that sustainable careers in the GenAI era depend less on technological proficiency than on educators' ability to maintain professional agency as they adapt to evolving technological environments. Generation Z educators may possess strong digital familiarity, yet long-term career sustainability requires opportunities to strengthen reflective

practice, ethical judgment, and adaptive professional identity within supportive institutional contexts. When these conditions are present, GenAI can reinforce rather than diminish teachers' professional authority, enabling technology to enhance educational quality without compromising the human foundations of teaching (Pavlović, 2025; Potter et al., 2023; Lu et al., 2025)

Risks of Generative AI for Sustainable Careers

Although generative AI offers substantial opportunities for educational innovation, its adoption also introduces risks that may undermine the sustainability of teaching careers. One major concern is the erosion of professional judgment when educators rely excessively on AI-generated outputs for lesson planning, assessment, feedback, and instructional decision-making. Such dependence may gradually reduce teachers' autonomy and shift their role from reflective pedagogues to technology operators. Because teaching inherently involves contextual interpretation, ethical reasoning, and relational engagement, these dimensions cannot be fully delegated to AI systems (Admiraal & Tigelaar, 2026; Lu et al., 2025; Mannekote et al., 2024).

Generative AI also creates challenges for professional identity. As educational institutions increasingly emphasize efficiency and digital productivity, teachers may feel pressure to demonstrate technological competence while continually maintaining high instructional quality. For Generation Z educators, this expectation is particularly demanding because digital familiarity is often assumed to equate with professional readiness. In reality, effective AI integration requires far more than technical proficiency; it also depends on pedagogical expertise, ethical judgment, curriculum knowledge, and emotional resilience (Admiraal & Tigelaar, 2026; Lewis, 2025; Lu et al., 2025).

A further risk concerns unequal institutional readiness. Educators working in well-resourced schools with clear AI policies, mentoring systems, and professional development opportunities are more likely to benefit from generative AI than those in under-resourced settings. Without adequate infrastructure and governance, AI adoption may widen existing inequalities, increase dependence on commercial platforms, and place greater responsibility on individual teachers to manage ethical, pedagogical, and technical challenges independently. Human-in-the-loop approaches, therefore, remain essential to ensure that teachers retain interpretive authority over AI-supported educational decisions (Pavlović, 2025; Mannekote et al., 2024).

Overall, the literature indicates that the risks associated with GenAI arise less from the technology itself than from inadequate governance and insufficient professional support. Sustainable careers require institutional policies that safeguard teacher autonomy, regulate workload, promote ethical use of AI, and strengthen reflective professional practice. When these conditions are absent, AI adoption may contribute to role ambiguity, professional anxiety, and digital overload. Conversely, supportive institutional environments enable educators to integrate AI critically while preserving the human, ethical, and relational foundations of teaching, thereby reducing risks to long-term career sustainability (Concannon et al., 2023; Lin, 2025; Potter et al., 2023).

Opportunities of Generative AI for Sustainable Careers

Generative AI offers significant opportunities to strengthen sustainable careers when it is integrated as a tool for professional development rather than a substitute for educators' expertise. By supporting lesson planning, assessment design, feedback generation, and instructional resource development, GenAI can reduce routine administrative tasks and allow teachers to devote greater attention to higher-order pedagogical activities, learner engagement, and instructional innovation. Studies consistently suggest that AI-assisted teaching enhances creativity, improves instructional

flexibility, and supports more personalized learning experiences when educators critically refine AI-generated outputs (Shen et al., 2025; Salinas-Navarro et al., 2024; Csaszar et al., 2025).

Beyond classroom practice, GenAI can facilitate continuous professional learning by supporting reflective practice, portfolio development, resource organization, and iterative skill improvement. AI-assisted learning environments provide opportunities for rehearsal, timely feedback, and self-directed learning that strengthen educators' confidence and adaptive expertise, particularly during the early stages of their careers (Choi-Lundberg, 2023; Elyoseph et al., 2026; Salinas-Navarro et al., 2024). For Generation Z educators, these affordances may accelerate professional growth while fostering lifelong learning and career adaptability.

GenAI also has the potential to enhance employability and long-term career development by expanding access to professional knowledge and supporting the acquisition of AI-related competencies. When integrated into teacher education programs, professional certification, and career portfolios, AI literacy becomes a transferable capability that strengthens career mobility and professional competitiveness. Evidence further suggests that educators who engage in AI-oriented job crafting are more likely to improve work meaningfulness, instructional innovation, and adaptive expertise, thereby contributing to sustainable career development (Cruz et al., 2025; Qu et al., 2025; Liu, 2026; Zhu et al., 2026).

However, these opportunities are conditional rather than automatic. The literature consistently indicates that the positive career outcomes associated with GenAI depend on pedagogical AI literacy, ethical governance, supportive institutional cultures, and continuous professional development. When educational institutions provide structured training, mentoring, and opportunities for reflective AI integration, teachers are more likely to perceive AI as a resource for professional growth rather than a source of uncertainty or occupational threat. Consequently, sustainable careers emerge not from exposure to AI alone but from educators' ability to combine technological capability with professional judgment, institutional support, and lifelong learning (Aguiñaga, 2025; Choi-Lundberg, 2023; Shen et al., 2025; Zhu et al., 2026).

Institutional Support and Career Sustainability

Sustainable careers in the era of generative AI depend not only on individual competence but also on the institutional conditions that enable educators to adapt, learn, and maintain professional well-being. While AI literacy and psychological resilience are essential individual resources, their long-term effectiveness is shaped by organizational support through professional development, mentoring, leadership, ethical governance, and collaborative learning environments. Without these enabling conditions, technological competence alone is unlikely to translate into sustainable career outcomes (Hashem et al., 2023; Kalenda et al., 2024; Kotsis, 2024; Hartley et al., 2024).

Professional development constitutes a central institutional mechanism for supporting AI integration. Effective programs extend beyond technical training by combining AI literacy with pedagogical design, ethical decision-making, assessment practices, and critical evaluation of AI-generated content. Equally important are mentoring and communities of practice, which provide opportunities for novice teachers to share experiences, interpret emerging challenges, and collectively develop responsible approaches to AI-supported teaching. Such collaborative environments strengthen professional identity while reducing the cognitive and emotional burden associated with rapid technological change (Kalenda et al., 2024; Hartley et al., 2024; Costa et al., 2024; Alhazzani, 2024).

Leadership and governance further determine whether AI becomes a resource for professional growth or a source of occupational strain. Educational leaders play a critical role in establishing clear policies on ethical AI use, data privacy, assessment integrity, equitable access, and workload

management. These governance structures protect teachers' professional autonomy while fostering innovation within clearly defined pedagogical and ethical boundaries. For Generation Z educators, whose digital familiarity may exceed their professional experience, such institutional guidance is particularly important in reducing role ambiguity, career anxiety, and digital overload (Subbiah et al., 2024; Lin et al., 2022; Shang, 2025).

Overall, the literature suggests that institutional support functions as a strategic enabler of career sustainability rather than as a supplementary resource. AI literacy, mentoring, leadership, ethical governance, and professional learning communities operate collectively to transform technological capability into resilient professional practice. Consequently, sustainable careers emerge from the interaction between individual psychological resources and supportive organizational ecosystems, enabling educators to integrate generative AI responsibly while preserving professional autonomy, well-being, and long-term career development (Hashem et al., 2023; Hartley et al., 2024; Kotsis, 2024).

Integrative Framework of Generative AI, Career Resilience, and Sustainable Careers among Generation Z Educators

Figure 2 presents a conceptual framework synthesizing the reviewed literature to explain how generative AI may contribute to sustainable careers among Generation Z educators. Rather than representing empirically validated causal relationships, the framework proposes theoretically informed pathways that integrate evidence from studies on AI in education, career resilience, and sustainable career development.

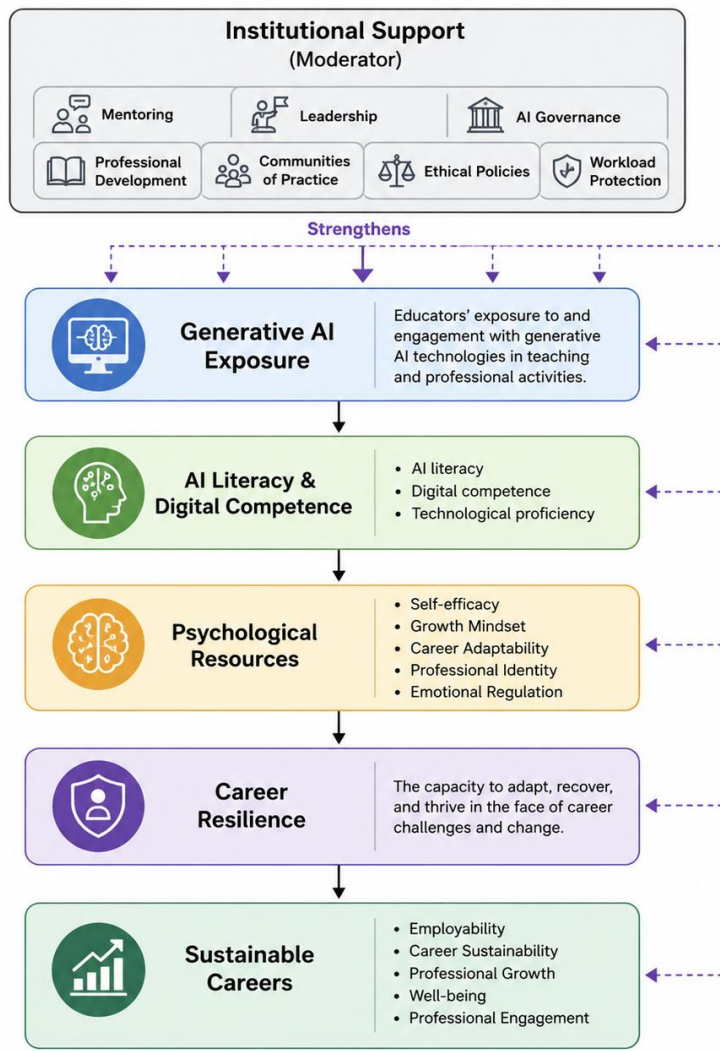
The framework suggests that exposure to generative AI alone is insufficient to promote sustainable careers. Instead, AI exposure must first be translated into AI literacy and digital competence, enabling educators to evaluate and pedagogically integrate AI into their professional practice critically. These competencies strengthen psychological resources—including self-efficacy, growth mindset, career adaptability, professional identity, and emotional regulation—which collectively foster career resilience. Institutional support, including professional development, mentoring, leadership, and ethical governance, moderates these relationships by determining whether technological capability develops into sustainable professional practice.

The framework offers three conceptual contributions. First, it positions AI literacy as a transformative professional capability rather than a purely technical skill. Second, it identifies psychological resources as the primary mechanisms by which AI-related competence translates into career resilience. Third, it conceptualizes institutional support as a contextual condition that strengthens or constrains educators' capacity to adapt to AI-mediated teaching environments. Together, these propositions explain why educators exposed to similar technologies may experience substantially different career outcomes (Gao et al., 2025; Zhang, 2025; Yang & Chen, 2025).

The framework also advances the literature by integrating three research traditions that have largely evolved independently: AI literacy, career resilience, and sustainable careers. Previous studies have typically examined these constructs separately, whereas the proposed model explains their interdependence within a unified conceptual perspective. This integration provides a more comprehensive explanation of how Generation Z educators can leverage technological change to achieve long-term professional sustainability.

From a practical perspective, the framework highlights that sustainable AI integration requires more than technology adoption. Educational institutions should combine AI literacy programs with psychological capacity-building, mentoring, ethical governance, and supportive leadership to strengthen educators' resilience while safeguarding professional autonomy and well-being. Future

empirical studies are needed to validate the proposed relationships across diverse educational contexts and examine the relative contribution of each construct to sustainable career development.



Note. The framework represents a conceptual model derived from the literature rather than an empirically validated causal model.

Figure 2. Conceptual framework of generative AI, career resilience, and sustainable careers among Generation Z educators.

The proposed framework synthesizes evidence from the reviewed literature, indicating that generative AI contributes indirectly to sustainable careers through AI literacy, digital competence, psychological resources, and career resilience, and that institutional support strengthens these relationships. As a conceptual synthesis rather than an empirically validated causal model, the framework provides a theoretical foundation for future empirical research on sustainable careers among Generation Z educators.

CONCLUSION

This review demonstrates that generative AI has the potential to support sustainable careers among Generation Z educators by enhancing instructional innovation, professional learning, and adaptive career development. However, these benefits depend on educators' AI literacy,

psychological resources, career resilience, and supportive institutional environments rather than on technology adoption alone. Career resilience emerges as a key mechanism by which educators can transform AI-related challenges into opportunities for long-term professional growth.

The study contributes by integrating generative AI, career resilience, and sustainable careers into a unified conceptual framework, extending current discussions beyond pedagogical applications toward professional sustainability. Practically, the findings highlight the importance of combining AI literacy, mentoring, ethical governance, and continuous professional development to strengthen educators' resilience and professional agency. As this study is based on a literature review, the proposed framework remains conceptual and requires empirical validation. Future research should examine the relationships among AI literacy, psychological resources, career resilience, and institutional support across diverse educational contexts to further advance sustainable career development in the era of generative AI.

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