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Beyond Skills: Digital Media Literacy and Ethical Awareness Among Gen Z in AI Culture

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ABSTRACT

This study examines how Generation Z in Indonesia interprets the use of artificial intelligence (AI) in digital communication, focusing on the shift from skill-based literacy toward reflective literacy in AI culture. As AI increasingly functions not only as a technical tool but also as a co-creator of content and meaning, concerns regarding authorship, algorithmic bias, and ethical responsibility have become more prominent. Using an interpretive qualitative approach, this study draws on semi-structured interviews with five Generation Z participants who actively use AI for academic and content-creation purposes. Data were analyzed through thematic analysis supported by NVivo. The findings reveal four interconnected dimensions of AI literacy: (1) AI as a Cognitive Partner, supporting learning and idea generation; (2) Critical Awareness, involving the evaluation and verification of AI-generated information; (3) Dependency versus Cognitive Reflection, highlighting tensions between technological convenience and independent thinking; and (4) Reflective AI Literacy, encompassing technical competence, prompt literacy, and ethical responsibility. The results indicate that digital literacy among Generation Z is evolving beyond operational skills toward a reflective practice that integrates critical evaluation, ethical judgment, and awareness of the broader implications of human–AI interaction. This study contributes to the emerging scholarship on AI literacy by extending digital media literacy beyond technical competence and proposing reflective AI literacy as a framework for understanding responsible and critical engagement with AI technologies.

Keywords: *Generation Z, media literacy, AI literacy, digital media, AI ethics*

INTRODUCTION

Background of Study

The rapid development of artificial intelligence (AI) has significantly transformed the ecosystem of digital communication (Jodie, 2024; Usmonov, 2025). AI is no longer merely a technical tool but has evolved into a cultural infrastructure shaping the production, distribution, and consumption of meaning, particularly among Generation Z as digital natives. This transformation is marked by the increasing integration of generative AI into everyday communication practices, where users interact with algorithmic systems not only to retrieve information but also to co-create knowledge and content. In content production, AI automates creative processes such as scriptwriting and video creation, enabling faster and more customized outputs while also reshaping creative workflows and redefining the boundaries between human creativity and machine assistance (Andriani, 2025). At the same time, this shift raises critical concerns regarding originality, authorship, and intellectual ownership, as AI-generated content challenges traditional notions of creativity and authenticity.

In terms of distribution, social media algorithms provide highly personalized recommendations and increase user engagement on short-video platforms such as TikTok, Instagram Reels, and YouTube Shorts (Manap & Scorpiantrien, 2025). These algorithmic systems not only curate content but also actively shape users' information environments by prioritizing visibility, relevance, and engagement metrics. While personalization enhances user experience, it also reinforces algorithmic bias, narrows exposure to diverse perspectives, and contributes to the formation of filter bubbles that influence how Generation Z constructs identity and social reality (Duong & Vo, 2025). Furthermore, continuous exposure to algorithmically curated content has implications for cognitive patterns, attention spans, and mental health, highlighting the complex interplay between technological systems and human behavior in digital environments.

At the institutional level, AI is reshaping media production processes and creating new forms of human–technology interaction (Tilak et al., 2025). The integration of AI with emerging technologies is expected to strengthen cross-industry collaboration and deepen human–AI partnerships, requiring more comprehensive literacy and ethical frameworks (Chen, 2026). In this context, institutions must develop competencies that combine technical skills, critical evaluation, and ethical judgment, particularly in addressing issues such as algorithmic bias, transparency, data governance, and accountability. Consequently, transparency, responsible innovation, and adaptive regulation become essential to ensure the sustainable use of AI in digital communication, while also safeguarding public trust and aligning technological advancement with broader social and cultural responsibilities (Andriani, 2025; Duong & Vo, 2025).

The rise of generative AI also challenges the concept of digital media literacy. AI increasingly functions as a co-creator influencing the production and legitimacy of meaning (Hallaq & Groshek, 2025). Therefore, Livingstone's media literacy framework—centered on accessing, analyzing, evaluating, and producing—needs to be expanded to address the complexity of AI-driven media environments (Baskara, 2025). This perspective is consistent with previous research demonstrating that media literacy requires individuals not only to access information but also to critically interpret, evaluate, and respond responsibly to digital content, particularly in environments vulnerable to misinformation and rapidly evolving information flows (Chow et al., 2024). The increasing integration of AI into everyday content creation practices, particularly through AI-enhanced multimodal composing, demonstrates that meaning-making processes now emerge from continuous negotiation between human agency and algorithmic systems (Zhang et al., 2026). This shift raises critical questions regarding authority, originality, and authenticity, as the boundaries between human intention and machine-generated output become increasingly blurred. Consequently, digital literacy in the AI era must be reconceptualized to include not only technical and analytical competencies but also a deeper reflective capacity to understand the epistemological and ethical implications of human–AI collaboration.

Problem Statement

The transformation of digital communication through AI has also shifted participatory culture toward AI-driven participation, where technology acts as a non-human actor shaping communication practices (R. C. Santos & Cagica Carvalho, 2025). Although previous studies have extensively discussed digital literacy, AI literacy, participatory culture, algorithmic systems, and ethical issues surrounding AI use, most have focused on conceptual frameworks, technological implications, or competency-based approaches. Existing research has provided valuable insights into how individuals access, evaluate, and create digital content in AI-mediated environments. However, limited attention has been given to how Generation Z subjectively interprets and reflects upon AI use in their everyday communication practices, particularly regarding the relationship between technical competence, critical awareness, and ethical responsibility.

This gap is important because Generation Z represents the first generation to engage intensively with generative AI as part of routine learning, communication, and content creation activities. Previous studies have shown that young people's digital media use plays a significant role in shaping their decision-making, learning experiences, and positive development, highlighting the importance of fostering critical and responsible engagement with digital technologies (Namayandeh Joorabchi et al., 2022). Their experiences provide a unique opportunity to understand whether digital literacy in the AI era continues to be understood primarily as a set of technical skills or whether it has evolved into a more reflective and ethically informed form of literacy. Therefore, this

study investigates how Generation Z interprets digital media literacy in the context of AI use, how they negotiate ethical issues related to AI-assisted communication, and how AI integration contributes to a shift from skill-based literacy toward reflective literacy within contemporary AI culture.

LITERATURE REVIEW

Digital Media Literacy in the Networked Society

Digital media literacy in the networked society is rooted in Livingstone's framework of four core competencies—accessing, analyzing, evaluating, and creating media messages—which positions individuals as active participants within digital communication environments (Frechette & Williams, 2016; Livingstone, 2004). In increasingly complex digital ecosystems, literacy extends beyond operational abilities to include cognitive and critical capacities for understanding message construction, media power structures, and the political–economic dynamics shaping information flows (Afrilyasanti et al., 2025).

Recent scholarship has further expanded media literacy to include social, civic, and ethical dimensions. The concept of digital citizenship emphasizes that participation in digital environments involves responsibility, accountability, and awareness of collective consequences (Hunt, 2023; Kusumalestari et al., 2021). Likewise, collaborative and critical literacy approaches have been promoted as strategies for addressing misinformation and information disorder across digital platforms (Milković et al., 2025). This perspective is reinforced by studies showing that media literacy is essential for helping individuals critically evaluate information credibility and resist the spread of misinformation in increasingly digital communication environments (Kamarulbaid et al., 2022)

However, much of the existing literature remains grounded in human-centered communication environments in which media content is assumed to be produced, interpreted, and evaluated primarily by human actors. The emergence of generative AI challenges this assumption because information production increasingly involves algorithmic systems that actively participate in generating knowledge, recommendations, and content. Consequently, traditional media literacy frameworks may be insufficient for explaining how individuals evaluate, negotiate, and ethically engage with AI-generated outputs, suggesting the need for an expanded literacy model adapted to AI-mediated communication environments.

Participatory Culture and the Transformation of Authorship

Participatory culture highlights the active involvement of users in producing, remixing, and distributing content, thereby blurring the distinction between producers and

consumers (Amin et al., 2025). Within this framework, users are understood as agents who contribute to collective meaning-making through digital participation.

The rise of generative AI fundamentally alters this dynamic. AI increasingly functions not merely as a tool but as a co-creator capable of generating text, images, and audiovisual content (Hua et al., 2024). Human creativity therefore becomes intertwined with algorithmic processes, creating new forms of human–machine collaboration (Zhang et al., 2026). This shift has significant implications for authorship, ownership, and accountability because creative outputs often emerge from interactions between human intentions and machine-generated suggestions (Fteiha et al., 2024).

While existing studies have extensively examined legal and ethical debates surrounding authorship in AI-assisted production (Edelmann, 2022; Xiao, 2023), most focus on regulatory and ownership issues. Less attention has been given to how users themselves subjectively understand and negotiate these boundaries in everyday communication practices. Understanding these reflections is important because perceptions of authorship and responsibility shape how individuals engage with AI technologies and evaluate their own role in content creation.

Ethical Awareness and Moral Negotiation in AI Use

The integration of AI into everyday communication does not automatically increase ethical awareness. Research on ethical fading suggests that interaction with automated systems may reduce individuals' sensitivity to the moral consequences of decisions, making ethical considerations less visible during technology use (Weirup et al., 2025). Consequently, ethical readiness has become an increasingly important component of AI literacy, with transparency, integrity, and reflexivity identified as key dimensions of responsible AI engagement (Kanbay et al., 2025).

Previous studies indicate that awareness of AI-related ethical issues often emerges reactively, particularly when individuals encounter algorithmic bias, misinformation, privacy concerns, or excessive dependence on AI systems (Ghotbi & Ho, 2021). Within this context, AI use involves continuous moral negotiation among competing values such as efficiency, autonomy, transparency, fairness, and accountability (Petersen, 2026). The Responsible AI framework seeks to address these challenges through human-centered principles emphasizing ethical governance and accountability (Tassela et al., 2023).

Nevertheless, existing research tends to conceptualize ethical awareness as a separate dimension of AI competence rather than as an integral component of digital literacy itself. As AI becomes embedded in everyday communication practices, ethical reflection increasingly intersects with information evaluation, content creation, and

decision-making processes, suggesting that ethics should be understood as a core element of literacy rather than an external consideration.

Toward Reflective AI Literacy

Although previous scholarship has significantly advanced understanding of media literacy, participatory culture, and AI ethics, these strands of research often remain fragmented. Media literacy studies primarily emphasize access, evaluation, and content production; participatory culture research focuses on human–machine collaboration and authorship; while AI ethics literature concentrates on accountability, transparency, and responsible use. Few studies explicitly integrate these perspectives into a unified framework for understanding how individuals make sense of AI in everyday communication practices.

This study argues that the increasing integration of AI into learning, information seeking, and content creation requires a broader conceptualization of literacy that moves beyond technical competence. Building upon Livingstone's media literacy framework and recent discussions on AI ethics, this research proposes the concept of Reflective AI Literacy, defined as the capacity to critically evaluate AI-generated information, understand the implications of human–AI collaboration, recognize the ethical consequences of AI use, and maintain human agency in technology-mediated communication. Reflective AI literacy therefore integrates technical competence, critical awareness, and ethical responsibility into a single interpretive framework. By examining Generation Z's experiences with AI, this study seeks to contribute empirical evidence to the emerging discussion on how digital literacy is being reconfigured within AI culture.

RESEARCH METHODOLOGY

This study employed an interpretive qualitative approach to explore how Generation Z interprets AI use in digital communication. Participants were selected through purposive sampling based on three criteria: (1) belonging to Generation Z (aged 18–25), (2) having actively used AI tools for at least six months in academic activities and/or social media content creation, and (3) willingness to reflect critically on their experiences. Informants were recruited through academic networks and peer referrals.

Five university students with varying academic backgrounds and levels of AI use participated in the study. Although limited in number, the sample was considered appropriate for interpretive qualitative inquiry, which prioritizes depth over generalization. Data saturation was reached when no substantially new themes emerged during the final interviews and subsequent analysis confirmed recurring patterns across participants.

Data were collected through semi-structured interviews lasting approximately 45–75 minutes. All interviews were conducted with informed consent, audio-recorded, and transcribed verbatim. Ethical considerations included voluntary participation, anonymity, confidentiality, and the right to withdraw from the study. A brief profile of the participants is presented in Table 1 to provide contextual background and facilitate interpretation of the findings.

Table 1. Participant Characteristics

Participant	Age	Gender	Academic Background	Primary AI Use	Intensity of AI Use
P1	22	Male	Communication Studies	Academic learning and information search	High
P2	21	Female	Communication Studies	Academic writing and content creation	High
P3	23	Male	Communication Studies	Academic tasks and social media content	Moderate
P4	21	Female	Communication Studies	Academic support and brainstorming	High
P5	22	Female	Communication Studies	Information search, visual design, and academic work	Moderate

As shown in Table 1, the participants represented Generation Z university students with diverse patterns of AI use in academic and digital communication contexts. Although all participants had experience using AI for educational purposes, they differed in the intensity and scope of use, providing a range of perspectives relevant to the study objectives.

Data were analyzed using thematic analysis supported by NVivo through open, axial, and selective coding. For example, statements about checking AI-generated information against other sources were initially coded as verification practices and later grouped under Critical Awareness. To ensure trustworthiness, the study employed source triangulation and method triangulation, complemented by iterative transcript review, reflexive memoing, and an audit trail throughout the analytical process.

FINDINGS AND DISCUSSION

Findings

Gen Z's Understanding of Digital Media Literacy in the AI Era

The hierarchy chart below presents the NVivo nodes derived from interviews with five Gen Z participants, illustrating how digital literacy is conceptualized in the context of AI use:

Figure 1. NVivo hierarchy chart illustrating how digital literacy is conceptualized in the context of AI use based on interview data

The NVivo analysis identified four main nodes that illustrate how Generation Z interprets digital media literacy in the context of AI use: Digital Literacy as Technical Competence**,** Critical Understanding of AI Information**,** Responsible AI Use**,** and Distinguishing AI Users from Digitally Literate Individuals**.**

The first node, Digital Literacy as Technical Competence, indicates that some participants view digital literacy mainly as the technical ability to use AI for academic activities and content production. Several sub-nodes emerged, including Using AI for learning and information search, AI as a learning assistant, Prompting skills and effective AI use, AI for academic productivity, and AI for content generation and brainstorming. Participants explained that AI helps them understand learning materials, generate ideas, structure written work, and produce content more efficiently. As Participant 1 explained:

> "I use AI to understand things I don't fully understand from books. AI becomes a discussion partner and a guide for learning (P1)."

Similarly, Participant 2 emphasized the role of AI in supporting content creation and overcoming creative blocks:

> "I use AI for academic work and social media captions. When I run out of ideas, it helps me brainstorm and generate words (P2)."

The second node, Critical Understanding of AI Information, shows that some participants recognize the limitations of AI as an information source. The sub-nodes include Awareness of AI bias, Questioning AI accuracy, Evaluating AI-generated information, and Cross-checking information sources. Participants consistently emphasized that AI outputs should not be accepted uncritically. Participant 1 stated:

> "Many people can use AI, but they do not question whether the information is biased or whether it is appropriate in a particular context (P1)."

Likewise, Participant 3 stressed the need for verification:

> "AI is not always accurate, so I always check the information again and compare it with other sources (P3)."

The third node, Digital Literacy as Responsible AI Use, indicates that participants associate digital literacy with responsibility in using technology. The sub-nodes include Responsible technology use, Awareness of digital consequences, Understanding appropriate AI use, and Setting boundaries in AI use. Participants emphasized that users remain responsible for AI-assisted content and should consider its potential impact before using or sharing it.

The final node, Distinguishing AI Users from Digitally Literate Individuals, highlights a distinction between those who simply use AI and those considered digitally literate. The sub-nodes include Copy-paste AI users, Surface-level AI use, Reflective AI users, and Awareness of AI impacts. Participants explained that superficial use—such as copying AI outputs without understanding—differs from reflective use that involves critical evaluation and awareness of technological impacts.

Ethical Reflection, Responsibility, and Authenticity in AI Use

The following hierarchy chart visualizes the NVivo nodes emerging from interview data, highlighting how Gen Z participants reflect on ethical considerations and responsibilities in using AI:

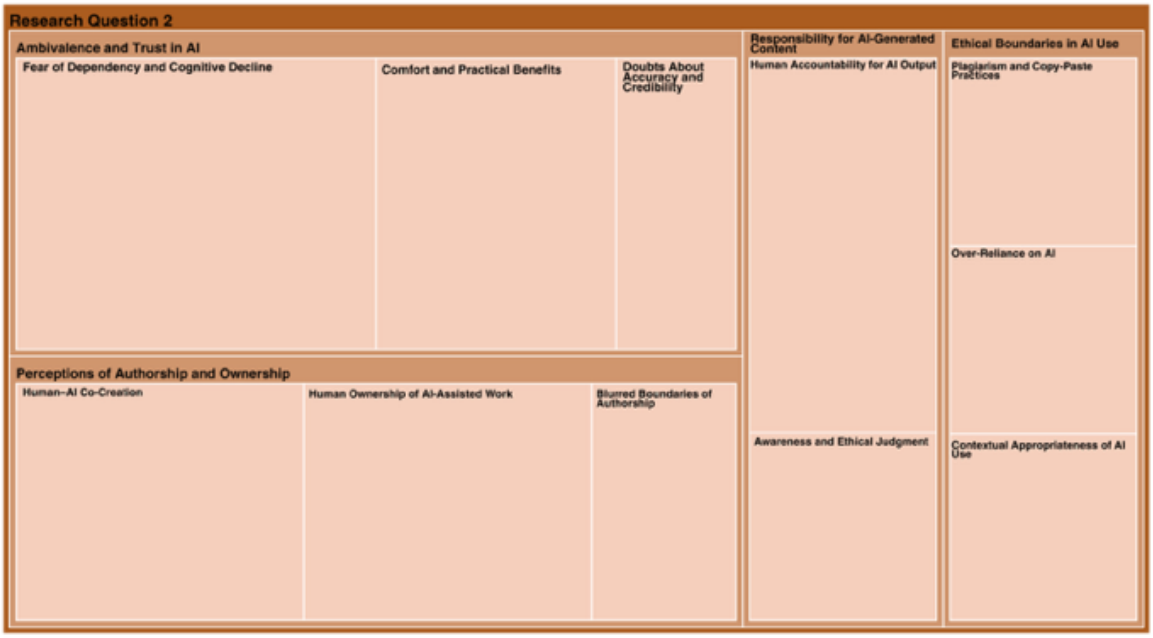

Figure 2. NVivo hierarchy chart illustrating thematic nodes related to ethical reflection in AI use.

The NVivo analysis of interviews with five participants identified four top nodes that illustrate how Generation Z reflects on the ethical dimensions, responsibility, and authenticity in the use of AI: Perceptions of Authorship and Ownership**,** Ethical Boundaries in AI Use**,** Responsibility for AI-Generated Content**,** and Ambivalence and Trust in AI**.**

The first top node, Perceptions of Authorship and Ownership, describes how participants understand the human–AI relationship in content production. Three nodes emerged: Human–AI Co-Creation, Human Ownership of AI-Assisted Work, and Blurred Boundaries of Authorship. Participants generally viewed AI-assisted outputs as collaborative products in which AI provides support, while the core ideas, direction, and decision-making remain human-driven. As P4 explained:

> "As long as the ideas and materials come from us, it can still be considered our work (P4)."

The second top node, Ethical Boundaries in AI Use, shows how participants define ethical limits in AI usage. The nodes include Plagiarism and Copy-Paste Practices, Contextual Appropriateness of AI Use, and Over-Reliance on AI. Participants considered AI use problematic when outputs were used directly without modification, understanding, or attribution. They also emphasized that AI should not be used in contexts requiring originality, such as exams or individual assignments, and that excessive reliance on AI may weaken intellectual effort and creativity.

The third top node, Responsibility for AI-Generated Content, reflects participants' awareness of human responsibility for AI-assisted outputs. Two nodes emerged: Human Accountability for AI Output and Awareness and Ethical Judgment. Participants stressed that users remain responsible for the consequences of AI-generated content and must apply ethical judgment when evaluating its implications. P2 remarked:

> "The responsibility is ours because we are the ones who ask for the output and decide to use it (P2)."

The final top node, Ambivalence and Trust in AI, illustrates participants' mixed attitudes toward AI. Three nodes appeared: Comfort and Practical Benefits, Doubts About Accuracy and Credibility, and Fear of Dependency and Cognitive Decline. While participants acknowledged AI's usefulness in generating ideas and accelerating content production, they also expressed concerns about accuracy and the risk that excessive dependence may reduce critical thinking and creativity.

The Shift from Skill-Based Literacy to Reflective Literacy in AI Culture.

The hierarchy chart below presents the NVivo nodes that capture the shift from technical use of AI toward reflective awareness among Gen Z participants:

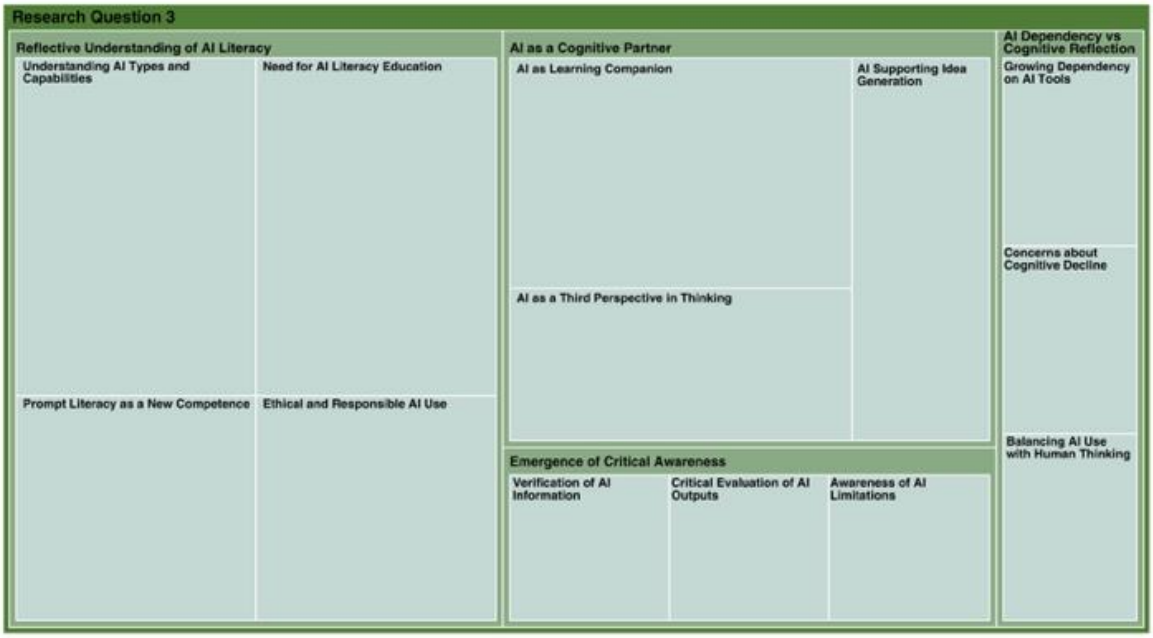

Figure 3. NVivo hierarchy chart showing nodes related to reflective understanding of AI literacy.

The NVivo analysis also indicates that Generation Z's reflections on AI use in digital communication practices are organized into four main themes: AI as a Cognitive Partner, Emergence of Critical Awareness, AI Dependency vs. Cognitive Reflection, and Reflective Understanding of AI Literacy.

The first top node, AI as a Cognitive Partner, shows that Generation Z increasingly views AI not merely as a technical tool but as a partner in the thinking process. Three nodes emerged: AI as a Learning Companion, AI as a Third Perspective in Thinking, and AI Supporting Idea Generation. Participants use AI to understand learning materials, brainstorm ideas, and discuss academic concepts. AI is also seen as a "third perspective" that helps evaluate ideas or offer alternative viewpoints. P5 explained:

> "AI becomes a discussion partner and a guide for learning. It helps me understand issues from different perspectives (P5)."

The second top node, Emergence of Critical Awareness, highlights the development of critical awareness toward AI outputs. The nodes include Verification of AI Information, Awareness of AI Limitations, and Critical Evaluation of AI Outputs. Participants reported practices such as checking sources, comparing AI responses with other references, and recognizing that AI outputs may be inaccurate or biased, indicating a growing tendency to question and evaluate AI-generated information.

The third top node, AI Dependency vs. Cognitive Reflection, reflects the tension between AI convenience and human cognitive reflection. The nodes include Growing Dependency on AI Tools, Concerns about Cognitive Decline, and Balancing AI Use with Human Thinking. Participants noted that AI often becomes the first option for searching information or completing tasks. However, they also expressed concerns that excessive reliance may weaken independent thinking, emphasizing the need to balance AI use with human reasoning where core ideas remain user driven. Participant 1 stated:

> "If people rely too much on AI, their thinking capacity may gradually decline (P4)."

The fourth top node, Reflective Understanding of AI Literacy, indicates that some participants understand AI literacy beyond technical skills. Four nodes emerged: Need for AI Literacy Education, Understanding AI Types and Capabilities, Prompt Literacy as a New Competence, and Ethical and Responsible AI Use. Participants suggested that users should understand different AI types and capabilities, develop effective prompting skills, and consider ethical responsibility in using this technology.

DISCUSSION

Gen Z's Understanding of Digital Media Literacy in the AI Era

Based on the findings, the four nodes indicate that digital literacy among Generation Z is no longer understood solely as a technical skill but is gradually shifting toward critical awareness and responsibility in the use of AI technologies.

The first node, Digital Literacy as Technical Competence, shows that participants position AI as a learning assistant for searching information, understanding complex concepts, and supporting brainstorming and writing processes. This finding aligns with the classical framework of media literacy proposed by Livingstone, which conceptualizes literacy as the ability to access, analyze, evaluate, and produce media messages (Frechette & Williams, 2016; Livingstone, 2004). However, within a digital communication ecosystem increasingly influenced by generative AI, technical abilities alone are insufficient to address the complexity of information production and circulation (Afrilyasanti et al., 2025; López et al., 2025). Using AI mainly as a productivity tool therefore represents an initial stage of literacy rather than fully developed critical literacy.

The second node, Critical Understanding of AI Information, indicates the emergence of evaluative literacy in responding to algorithmic systems that may produce biased or inaccurate information (Edelmann, 2022). In this context, media literacy is no longer limited to interpreting media messages but also involves understanding the algorithmic logic and data structures that shape AI-generated outputs (Hallaq & Groshek, 2025).

The third node, Responsible AI Use, reflects an increasing awareness of the ethical dimension of digital literacy, which is becoming increasingly important in AI-driven culture. Research on AI ethics shows that interaction with automated systems may lead to ethical fading, where individuals become less sensitive to the moral implications of their actions (Weirup et al., 2025). Consequently, digital literacy in this context is not only related to technological skills but also to the ability to make responsible decisions in the use of AI, in line with the concept of digital citizenship, which emphasizes social responsibility in digital participation (Hunt, 2023).

The final node, Distinguishing AI Users from Digitally Literate Individuals, reflects a transformation in digital participatory culture. While digital participation was previously understood as active user involvement in content production (Amin et al., 2025), in the AI era the production of meaning increasingly emerges from collaboration between humans and algorithmic systems (Zhang et al., 2026). This condition raises new questions regarding creative authority and authorship in AI-assisted content production (Fteiha et al., 2024; Xiao, 2023).

Ethical Reflection, Responsibility, and Authenticity in AI Use

This study shows that the use of AI is not understood merely as a technical practice but also involves a reflective process in negotiating creative authority, academic integrity, and digital responsibility.

The theme Perceptions of Authorship and Ownership shows that Generation Z still positions humans as the primary owners of creative work, even when AI is involved, although some participants acknowledge ambiguity in determining authorship when AI contributes significantly. This finding reflects the transformation of participatory culture in the AI era, where content production is no longer fully centered on individuals but increasingly occurs within a collaborative configuration between humans and algorithmic systems (Amin et al., 2025; Hua et al., 2024; Xiao, 2023; Zhang et al., 2026).

The theme Ethical Boundaries in AI Use shows that the use of AI must consider contextual appropriateness, particularly in academic situations that require originality, such as examinations or individual assignments. Concerns about over-reliance on AI also emerged, as it is perceived to potentially reduce intellectual effort and creativity. This reflection illustrates a process of moral negotiation in technological use, where individuals balance the efficiency offered by AI with the value of academic integrity (Weirup et al., 2025).

The theme Responsibility for AI-Generated Content demonstrates an awareness that responsibility for content ultimately remains with human users, even when AI is involved in the production process. This perspective aligns with the Responsible AI framework, which highlights the importance of accountability, transparency, and ethical reflection in technological use (Kanbay et al., 2025; Petersen, 2026; Tassela et al., 2023).

Meanwhile, the theme Ambivalence and Trust in AI reveals that digital literacy within AI culture is no longer limited to the ability to operate technology but also involves critical awareness of the cognitive and social implications of automation (Baskara, 2025; Hallaq & Groshek, 2025; Tsang, 2025).

The Shift from Skill-Based Literacy to Reflective Literacy in AI Culture.

The findings of this study indicate a shift in digital literacy from purely technical skills toward reflective awareness, encompassing cognitive, critical, and ethical dimensions in human–AI interaction. These results suggest that in AI culture, media literacy is no longer limited to operational competence but has evolved into a reflective capacity that includes understanding technological logic, algorithmic bias, and the social implications of AI use (Baskara, 2025; Hallaq & Groshek, 2025; Livingstone, 2004).

The node AI as a Cognitive Partner shows that AI is no longer merely an information retrieval tool but is increasingly involved in the process of knowledge production. This finding aligns with the concept of AI-enhanced multimodal composing, which highlights that digital content production now occurs through collaboration between humans and algorithmic systems (Zhang et al., 2026). Within participatory culture, this

development marks a shift from human-centered participation toward human–machine participation, where AI influences the process of meaning-making in the digital communication ecosystem (Amin et al., 2025; Hua et al., 2024).

The second node, Emergence of Critical Awareness, indicates that some members of Generation Z have begun to recognize that AI-generated content is not entirely neutral and may contain bias or inaccuracies. This finding reinforces the argument that media literacy in networked societies has evolved into a cognitive and evaluative capacity that enables individuals to understand the structures of information production and the power relations behind them (Afrilyasanti et al., 2025; López et al., 2025). In this context, interaction with AI stimulates critical literacy practices, particularly in evaluating credibility and recognizing the limitations of algorithmic systems.

The node AI Dependency vs Cognitive Reflection reflects a dynamic process of moral negotiation in technological use, where individuals attempt to balance technological efficiency with intellectual autonomy (Ghotbi & Ho, 2021). This phenomenon is also related to the concept of ethical fading, referring to the tendency to overlook moral considerations when individuals become overly dependent on automated systems (Weirup et al., 2025).

Meanwhile, the node Reflective Understanding of AI Literacy suggests that digital literacy in AI culture is gradually evolving toward reflective literacy, which integrates technical competence, critical awareness, and ethical responsibility in digital communication practices (Baskara, 2025; Tsang, 2025).

Therefore, literacy in the AI era can no longer be understood merely as the ability to use technology, but rather as a reflective understanding of the social, cultural, and ethical implications of human interaction with algorithmic systems (Hallaq & Groshek, 2025).

Theoretical Contribution: Extending Media Literacy toward Reflective AI Literacy

This study contributes theoretically to the evolving scholarship on media literacy by extending Livingstone's (2004) framework beyond its original emphasis on accessing, analyzing, evaluating, and creating media messages. While these competencies remain essential, the findings suggest that they are no longer sufficient for understanding literacy practices within AI-mediated communication environments. Unlike traditional digital media, generative AI actively participates in knowledge production, content generation, and decision-making processes, thereby transforming the relationship between users and media technologies.

The findings reveal that Generation Z does not perceive AI merely as a technological tool but increasingly as a cognitive partner that influences thinking, creativity, and

communication practices. This condition requires a broader conceptualization of literacy that includes the capacity to critically reflect on how AI systems shape information, knowledge, and meaning. Participants consistently demonstrated concerns regarding algorithmic bias, information credibility, dependency, authorship, and ethical responsibility, indicating that literacy in AI culture involves reflexive engagement rather than operational competence alone.

Based on these findings, this study proposes the concept of Reflective AI Literacy, defined as the integrated capacity to (1) use AI effectively, (2) critically evaluate AI-generated outputs and underlying algorithmic processes, (3) recognize the ethical and social consequences of AI-assisted communication, and (4) maintain human agency and accountability in human–AI collaboration. Reflective AI literacy therefore expands traditional media literacy by incorporating epistemological awareness, ethical judgment, and reflexive decision-making.

Conceptually, this framework positions literacy as a multidimensional process that combines technical competence, critical evaluation, and ethical reflexivity. The proposed model contributes to contemporary debates on AI literacy by bridging media literacy scholarship, participatory culture theory, and Responsible AI perspectives. It also provides a theoretical foundation for future research examining how individuals negotiate human agency, creativity, and responsibility within increasingly AI-driven communication ecosystems.

CONCLUSION AND IMPLICATIONS

This study demonstrates that digital media literacy among Generation Z is shifting from a predominantly skill-based orientation toward a more reflective form of literacy in AI culture. AI is increasingly perceived not only as a technical tool but also as a cognitive partner that supports learning, idea generation, and content creation. At the same time, participants showed growing awareness of the need to critically evaluate AI-generated information, recognize its limitations, and consider ethical issues such as authorship, accountability, and responsible use.

Theoretically, this study extends Livingstone's media literacy framework by arguing that literacy in AI-mediated environments requires not only the ability to access, analyze, evaluate, and create content, but also reflective and ethical awareness. The findings support the concept of Reflective AI Literacy**,** which integrates technical competence, critical evaluation, and ethical responsibility in human–AI interaction.

Practically, the findings suggest that AI literacy initiatives should move beyond technical training to include prompt literacy, critical thinking, ethical reasoning, and responsible decision-making. Such an approach can help young people engage with

AI more critically, responsibly, and reflexively in an increasingly AI-driven communication environment.

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AUTHOR(S) CONTRIBUTION

- Tia Muthiah Umar: Conceptualization, Methodology, Investigation, Formal Analysis, Supervision, Writing – Original Draft, Writing – Review & Editing.

- Tsaniya Salman: Conceptualization, Investigation, Data Curation, Formal Analysis, Writing – Original Draft, Writing – Review & Editing.

CONFLICT OF INTEREST

The authors declare no conflicts of interest related to this study.

ETHICS STATEMENT

This study was conducted in accordance with accepted ethical standards. Informed consent was obtained from all participants, and their anonymity and confidentiality were strictly maintained. AI tools were used only to assist with language editing.

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