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WHERE IS THE LINE? GENERATIVE AI, PROFESSIONAL JUDGMENT, AND INCLUSIVE PRACTICE

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Abstract:
Generative artificial intelligence (GenAI) is becoming an increasingly common part of educational practice, raising new questions about how educators determine when AI-generated materials are appropriate for supporting students with diverse needs in inclusive classrooms. This mixed-methods study examined how 351 educators in Italy used GenAI in inclusive practice and how they determined when its use was appropriate. Quantitative analyses examined patterns of GenAI use, training, and perceptions, while qualitative analyses explored educators' experiences, concerns, training needs, and the professional judgments that guided their use of GenAI. Findings indicated that educators were already using GenAI to support inclusive practice despite limited formal preparation, with nearly half reporting no training in its educational use. Participants consistently emphasized the need for practical, classroom-based professional development and described reviewing, adapting, and evaluating AI-generated materials before using them with students. They also expressed concerns about overreliance, loss of critical thinking, bias, privacy, and whether AI-generated outputs could adequately address the needs of individual learners. Framed through the Artificial Intelligence Agent-Pedagogical Content Ethical Knowledge (AIA-PCEK) framework, the findings suggest that effective use of GenAI in inclusive practice depends not only on access to AI tools but also on educator preparation and professional judgment.

Keywords: inclusive education, artificial intelligence, technology, professional development, professional judgment

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1. Introduction

Artificial intelligence (AI) is rapidly becoming woven into the educational landscape, reshaping teaching and learning practices. AI refers to "a machine-based system that, for explicit or implicit objectives, infers, from the input it receives, how to generate outputs such as predictions, content, recommendations, or decisions that can influence physical or virtual environments" (Organisation for Economic Co-operation and Development [OECD], 2024, p. 4).

Generative AI (GenAI), a subset of AI, is a computational technology that can create new content such as text, images, and audio in response to user prompts (Feuerriegel et al., 2024).

Although earlier forms of GenAI technologies were largely limited to specialized technical settings, recent advances in data, computing power, and large language models (LLMs) have made these tools more accessible to the general public. This broader accessibility is reflected in recent survey data showing that 62% of U.S. adults report interacting with AI at least several times a week (Pew Research Center, 2025). The rapid adoption of LLM-based multimodal tools, including OpenAI's ChatGPT, Microsoft's Copilot, and Google's Gemini, has expanded everyday uses of GenAI across information seeking, content creation, and personal productivity.

As these tools have become more visible in everyday life, they have also drawn increased attention to how GenAI might be used in schools, including for teaching, learning, assessment, and student support (Delello et al., 2024b). For educators, GenAI may support tasks such as content generation, grading, instructional planning, feedback, and resource recommendation (Delello et al., 2024b; Kadaruddin, 2023; Trust et al., 2023; Yan et al., 2024). These uses are especially relevant to inclusive education, where teachers often adapt materials, provide accommodations, scaffold instruction, and respond to students' varied learning, language, communication, and access needs (De Giuseppe et al., 2026). However, GenAI use in education may also introduce risks related to accuracy, bias, privacy, overreliance, and academic integrity (Al-kfairy et al., 2024; Delello et al., 2025). In inclusive classrooms, these risks are particularly important because GenAI materials may appear useful while still containing inaccuracies, embedded bias, overlooking accessibility needs, or failing to align with students' individualized supports, learning plans, and/or instructional goals (Sakowicz & Hamidi, 2025; Wang et al., 2025; Zhao et al., 2025).

Although prior research has examined educators' perceptions of GenAI for inclusive instruction, less is known about how educators determine whether AI-generated content is appropriate for particular students, learning tasks, and instructional contexts. This study examined how educators used and evaluated GenAI to support students with diverse needs. The following research questions guided this study:

1) How do educators describe the use of GenAI to respond to the diverse needs of students?
2) What benefits do educators perceive in using GenAI to respond to the diverse needs of students?

3) What risks do educators perceive in using GenAI to respond to the diverse needs of students?
4) How do educators describe biases in using GenAI for different student groups?
5) How do educators determine whether the use of GenAI is appropriate for students with diverse needs?

2. Literature Review

The development of GenAI builds on earlier work in artificial intelligence. Early conceptual foundations are often traced to Turing's (1950) question of whether machines could demonstrate intelligent behavior and to McCarthy and colleagues' Dartmouth proposal, which framed AI around the possibility that features of learning and intelligence could be described in ways that machines might simulate (McCarthy et al., 1955).

AI has been part of educational technology research since at least the 1980s, when intelligent tutoring systems (ITS) were described as systems designed to provide individualized instruction, guidance, and feedback within structured learning environments (Wenger, 1987). Later AI applications in education broadened into areas such as profiling and prediction, assessment and evaluation, adaptive systems, and personalization (Zawacki-Richter et al., 2019). These models are trained on large collections of text and other data to identify patterns in language and generate responses to user prompts (Naveed et al., 2025). With the release of ChatGPT in November 2022, LLM-based GenAI became more visible and accessible to users without specialized technical expertise (OpenAI, 2022).

In educational contexts, GenAI has been studied as a tool for learning design, content generation, feedback, assessment, and student learning outcomes (Giannakos et al., 2025; Han et al., 2025). Van den Berg and du Plessis (2023) examined ChatGPT's possible contribution to lesson planning in teacher education, including how it may support the generation of ideas for objectives, activities, and instructional resources. Delello et al. (2025) also found that educators used AI to improve efficiency and streamline teaching-related tasks.

Researchers have also identified several risks associated with GenAI use in education. GenAI tools may produce inaccurate, misleading, unsupported, or fabricated content (Baidoo-Anu & Owusu Ansah, 2023). Concerns have also been raised about fairness, transparency, accountability, student agency, and inclusion when AI is used in educational decision-making (Holmes et al., 2022). Other research has cautioned that frequent reliance on AI tools may reduce students' opportunities to engage in critical thinking, analysis, and problem-solving (Hassen, 2025), while academic integrity concerns remain central when students use GenAI in ways that misrepresent their own learning or work (Peterson, 2025). Fan et al. (2025) further described a type of "metacognitive laziness" as reduced learner monitoring, reflection, and self-assessment when students depend heavily on AI-generated support.

2.1 GenAI, Educator Workload, and Inclusive Practice

Inclusive education is grounded in a commitment to educational equity, access, and participation. UNESCO's (1994) *Salamanca Statement* emphasized that "all children should learn together, wherever possible, regardless of any difficulties or differences they may have" and that inclusive schools should "recognize and respond to the diverse needs of their students" (p. 11). Later frameworks, including the Convention on the Rights of Persons with Disabilities (United Nations, 2006) and the *Global Education Monitoring Report* (UNESCO, 2020), further emphasized equitable access, participation in learning, and lifelong learning opportunities for all learners. Despite these international commitments, global estimates indicated that approximately 240 million children live with disabilities, with many still excluded from school or enrolled without adequate support for full participation in learning (UNICEF, 2021). Inclusive education requires attention to disability, language, culture, access, communication, and other learner differences that may shape participation in school (UNESCO, 1994, 2020). Responding to these differences often requires instructional adaptations, accommodations, accessible materials, and other forms of student support. These responsibilities require educators to make ongoing instructional decisions that rely on professional expertise and judgment.

Recent studies have identified several ways AI and GenAI may support inclusive education, particularly through adaptation, personalization, accessibility, language support, and reducing teacher workload (Fitas, 2025; Linsenmayer, 2025). These capabilities align with many of the instructional responsibilities educators perform when supporting students with diverse learning needs. Special education research has also described how AI tools may assist teachers with collaboration, reading adaptation, and progress-monitoring assessments (Goldman et al., 2024).

2.2 Equity, Bias, Policy, and Guidance

The use of GenAI in inclusive education also raises questions about equity, bias, privacy, and access. Gonzales (2024) argued that rapid advances in AI have widened the digital divide, creating an "AI divide" in which marginalized communities may be most affected. These concerns are especially relevant in schools, because unequal access to technology, language differences, under-resourced settings, and limited accessibility supports may shape whether students and educators benefit from AI-supported tools. In Italy, Gambacorta et al. (2025) found that GenAI awareness and use varied by age, gender, education, and student status, showing that adoption is not evenly distributed across the broader population. Judijanto (2025) similarly cautioned that AI may deepen existing educational inequities when access, infrastructure, implementation, and oversight are not addressed.

Bias is also an important concern because AI systems are trained on large datasets that may reflect existing social, cultural, linguistic, and educational inequities. Holmes et al. (2022) emphasized fairness, transparency, accountability, student agency, and inclusion as central concerns in AI-supported educational decision-making. The U.S. Department of Education (2023) also identified data privacy, algorithmic discrimination, transparency, and human oversight as important issues for AI in teaching and learning.

Prior work with K-16 educators has highlighted concerns about preparedness, policy guidance, and the ethical implications of AI use in educational settings (Delello et al., 2024a).

Policy and guidance documents have emphasized ethical, human-centered, and educator-mediated AI use. For example, UNESCO's guidance on GenAI in education and research highlights regulation, privacy protection, human capacity development, and human-centered implementation (Miao & Holmes, 2023). Likewise, the European Commission (2022) emphasized critical engagement with AI and data use, including fairness, transparency, privacy, safety, and inclusion. In Italy, recent national policy has addressed the responsible introduction of AI in school institutions, including attention to opportunities, risks, and regulatory considerations (Ministero dell'Istruzione e del Merito, 2025). These issues also appear in research on educators' preparation and classroom use. Varsik and Vosberg (2024) noted that AI may support adaptive learning, accessibility, and teacher-led educational support, but that implementation depends on access, teacher preparation, and attention to bias. Delello et al. (2025) found that educators identified professional development, AI literacy, ethical considerations, and institutional policies as important needs, while also raising concerns about privacy, plagiarism, dependency, and reduced interpersonal interaction.

2.3 Theoretical Framework: AIA-PCEK and Professional Judgment

This study is guided by the Artificial Intelligence Agent-Pedagogical Content Ethical Knowledge (AIA-PCEK) framework developed by Mimoudi and Mokhtari (2025). The framework builds on earlier educational technology models, including Pedagogical Content Knowledge (PCK) (Shulman, 1986, 1987) and the Technological Pedagogical Content Knowledge (TPACK) framework (Mishra & Koehler, 2006).

Mimoudi and Mokhtari (2025) explained that GenAI requires an expanded framework because AI systems are more than static tools controlled by teachers. Instead, these systems can generate content, respond to user input, provide feedback, and interact with learners in ways that require teacher oversight. AIA-PCEK includes four interrelated domains: Artificial Intelligence Agent Knowledge (AIAK), Ethical Knowledge (EK), Pedagogical Knowledge (PK), and Content Knowledge (CK). AIAK refers to educators' understanding of how AI systems operate as adaptive agents and how to manage their role in learning environments. EK includes attention to privacy, bias, transparency, accountability, consent, and equitable access. PK focuses on designing and guiding human-centered, AI-supported learning experiences. CK emphasizes educators' responsibility for curating, evaluating, and aligning AI-generated content with curricular goals.

AIA-PCEK provides an appropriate theoretical lens because effective GenAI use requires more than access to AI tools; it also depends on educators' professional judgment. In inclusive practice, educators must evaluate AI-generated content in relation to individual student needs, ethical responsibilities, instructional goals, and content accuracy before deciding whether and how it should be used. The framework aligns with the purpose of this study because it helps explain how educators determine the

appropriate role of GenAI in supporting instruction while maintaining professional responsibility.

3. Methodology

This study used an exploratory mixed-methods approach to examine educators' perspectives on GenAI in inclusive practice. Specifically, the study explored educators' familiarity with GenAI, patterns of professional use, perceived value for supporting students with diverse learning needs, concerns about risk and overreliance, and the professional judgment educators make when determining appropriate AI use. Because GenAI continues to evolve rapidly in educational settings, the study was designed to capture both measurable response patterns and participants' written explanations of their experiences, concerns, and support needs.

3.1 Survey Design and Recruitment

Quantitative and qualitative data were gathered through an anonymous online survey administered through Qualtrics (Qualtrics.com). The survey was conducted in Italy, and the survey link was distributed through Italian educator networks, university and professional contacts, and related communication channels. This snowball sampling approach helped reach participants across a range of roles and instructional contexts. To participate in the study, individuals had to be at least 18 years old and identify as an educator.

Following the consent item, the survey included nine closed-ended questions and four open-ended questions. Closed-ended items gathered demographic and professional background information and assessed participants' familiarity with GenAI, frequency and purposes of professional use, amount of training received, use of GenAI for diverse student needs, and perceptions of benefits, risks, bias, and institutional guidance. The four open-ended questions provided additional insight into educators' perspectives by exploring their experiences using GenAI, concerns about its use, training needs, and professional judgments about when GenAI was appropriate in inclusive practice.

Because participation was voluntary and respondents were permitted to skip questions, the number of responses varied across survey items. The study was approved by the Institutional Review Board at the researchers' university (IRB #2026-107).

3.2 Participants of the Study

A total of 378 individuals consented to participate. The analyses reported in this study included up to 351 participants who completed individual survey items. Of those participants who reported their gender, most identified as female (n = 271, 77.2%), followed by male (n = 79, 22.5%). One participant identified as other (n = 1, 0.3%). Participants also differed in their years of professional experience. Of the 350 respondents who answered the experience item, 129 (36.9%) reported 0 to 5 years in education, 116 (33.1%) reported 6 to 10 years, 28 (8.0%) reported 11 to 15 years, 10 (2.9%) reported 16 to 20 years, and 67 (19.1%) reported more than 20 years of experience.

Participants represented a range of educational roles. Of the 349 participants who answered this item, 180 (51.6%) identified as in-service K–12 teachers, and 96 (27.5%) identified as pre-service teachers. Smaller numbers identified as higher education faculty or instructors (n = 3, 0.9%), teaching assistants, instructional aides, or paraprofessionals (n = 2, 0.6%), and administrators in school or higher education settings (n = 1, 0.3%). An additional 67 participants (19.2%) selected "Other," describing roles connected to classroom teaching, support teaching, primary or secondary education, or temporary teaching appointments.

4. Data Analysis

Quantitative and qualitative data were analyzed to provide a broader understanding of the educators' responses. Closed-ended survey data were examined using descriptive statistics, including frequencies and percentages. These analyses were used to summarize participant characteristics, GenAI familiarity and use, training experiences, and response patterns related to inclusive practice, perceived benefits, risks, professional judgment, and institutional guidance. Because participants were not required to answer every question, sample sizes varied across individual items. Missing responses were handled using available case analysis. Spearman's rank-order correlations were also conducted to examine associations among ordinal survey variables, including GenAI training, familiarity, professional use, use for diverse student needs, confidence identifying biased outputs, and benefit-related agreement items.

Open-ended responses were analyzed using an inductive and comparative process (Merriam & Tisdell, 2016). Members of the research team independently reviewed the responses and developed preliminary codes from participants' verbatim language. When participants' own words clearly captured the meaning of a response, *in vivo* codes were used to preserve that language. The researchers then met to compare coding decisions, discuss areas of agreement and difference, and refine the coding structure. Through this iterative process, codes were organized into broader categories and themes related to educators' concerns about GenAI, desired training and resources, examples of inclusive use, and professional boundaries for appropriate implementation. Trustworthiness was enhanced through an independent examination and group comparison until consensus was reached.

5. Findings

5.1 Educator Knowledge, Use, and Training Related to GenAI

When asked, "How familiar are you with Generative Artificial Intelligence (GenAI) (e.g., ChatGPT, Gemini, Claude, Copilot)?," participants reported varying levels of familiarity with GenAI. Of the 351 participants who responded to the item, more than half described themselves as moderately knowledgeable (n = 184, 52.4%), while 141 participants (40.2%) reported being slightly knowledgeable. Fewer participants described themselves as extremely knowledgeable (n = 22, 6.3%) or not knowledgeable at all (n = 4, 1.1%).

Professional use of GenAI also differed. The largest group reported using GenAI a few times a week (n = 126, 35.9%), followed by those who rarely used it (n = 103, 29.3%). Another 70 participants (19.9%) reported using GenAI a few times a month, while 42 (12.0%) reported daily use. Only 10 participants (2.8%) indicated that they never used GenAI in their professional work.

Compared with reported familiarity and professional use of GenAI, participants reported lower levels of training. Almost half of participants (n = 159, 45.4%) reported receiving no training on the use of GenAI in education. Another 104 participants (29.7%) reported receiving a little training, and 70 (20.0%) indicated that they had received a moderate amount. Fewer participants reported receiving a lot of training (n = 15, 4.3%) or a great deal of training (n = 2, 0.6%).

5.2 Educational Purposes for GenAI Use

Participants were asked to identify the educational purposes for which they used GenAI. Because more than one response could be selected, percentages were calculated from the total number of responses. Student support documentation was the most frequently reported purpose (n = 159, 26.1%), followed by lesson planning (n = 114, 18.7%) and differentiation (n = 114, 18.7%).

Other reported uses included accessibility (n = 69, 11.3%), assessment creation (n = 46, 7.5%), behavior or social supports (n = 33, 5.4%), and communication with families (n = 17, 2.8%). An additional 58 selections (9.5%) were categorized as "Other." Of the participants who selected "Other," 42 provided a written explanation. These responses included uses such as research, content creation, preparing tests, simplifying structured worksheets, creating images, completing documents, and study support. Twelve responses also indicated that participants did not currently use GenAI, including "I do not use it" or "I do not use it for educational purposes."

5.3 Use of GenAI to Address Diverse Student Needs

Participants responded to a series of statements using a five-point Likert scale ranging from "Never" to "Very Often" (see Table 1). For the statement, "I use GenAI to adapt lesson materials for students with diverse learning needs," the most frequent response was sometimes (n = 144, 41.4%), followed by rarely (n = 78, 22.4%), never (n = 56, 16.1%), often (n = 56, 16.1%), and very often (n = 14, 4.0%).

For the statement, "I use GenAI to simplify or rewrite text for students who need additional support," the most common response was sometimes (n = 130, 37.6%). Other participants reported rarely (n = 75, 21.7%), never (n = 71, 20.5%), often (n = 56, 16.2%), or very often (n = 14, 4.0%).

For accessibility-related tasks, such as summaries, translation, captions, or visual supports, participants most often selected sometimes (n = 137, 39.4%). This was followed by rarely (n = 83, 23.9%), often (n = 61, 17.5%), never (n = 54, 15.5%), and very often (n = 13, 3.7%). For the item on creating personalized examples, activities, or practice materials, the most frequent response was sometimes (n = 126, 36.4%), followed by rarely (n = 87, 25.1%), often (n = 66, 19.1%), never (n = 55, 15.9%), and very often (n = 12, 3.5%).

For the item related to behavioral, social, or self-regulation needs, the most common response was never (*n* = 118, 34.2%). Other participants reported rarely (*n* = 100, 29.0%), sometimes (*n* = 96, 27.8%), often (*n* = 27, 7.8%), or very often (*n* = 4, 1.2%). When asked whether they used GenAI to help create student support documents such as IEPs, BEPs, accommodations, or modifications, participants most often reported sometimes (*n* = 104, 30.2%), followed by never (*n* = 96, 27.9%), rarely (*n* = 89, 25.9%), often (*n* = 46, 13.4%), and very often (*n* = 9, 2.6%).

Table 1: Frequency of GenAI Use to Address Diverse Student Needs

Statement	Never	Rarely	Sometimes	Often	Very Often
I use GenAI to adapt lesson materials for students with diverse learning needs.	56 (16.1%)	78 (22.4%)	144 (41.4%)	56 (16.1%)	14 (4.0%)
I use GenAI to simplify or rewrite text for students who need additional support.	71 (20.5%)	75 (21.7%)	130 (37.6%)	56 (16.2%)	14 (4.0%)
I use GenAI for accessibility-related tasks, such as summaries, translation, captions, or visual supports.	54 (15.5%)	83 (23.9%)	137 (39.4%)	61 (17.5%)	13 (3.7%)
I use GenAI to create personalized examples, activities, or practice materials.	55 (15.9%)	87 (25.1%)	126 (36.4%)	66 (19.1%)	12 (3.5%)
I use GenAI to help address behavioral, social, or self-regulation needs.	118 (34.2%)	100 (29.0%)	96 (27.8%)	27 (7.8%)	4 (1.2%)
I use GenAI to help create student support documents such as IEPs, BEPs, or accommodations/modifications.	96 (27.9%)	89 (25.9%)	104 (30.2%)	46 (13.4%)	9 (2.6%)

5.4 Perceived Benefits, Risks, Bias, and Appropriateness

Participants responded to Likert-type agreement items about the perceived benefits, risks, bias, and appropriateness of GenAI use in inclusive practice. Response options ranged from "Strongly Disagree" to "Strongly Agree" (see Table 2).

For the item on whether GenAI helps participants respond more effectively to diverse student needs, the largest group somewhat agreed (*n* = 159, 45.4%), followed by those who neither agreed nor disagreed (*n* = 133, 38.0%). Smaller numbers somewhat disagreed (*n* = 29, 8.3%), strongly disagreed (*n* = 17, 4.9%), or strongly agreed (*n* = 12, 3.4%).

Participants also responded to items related to efficiency and personalization. For the statement, "GenAI saves time when preparing adapted or differentiated materials," the largest group somewhat agreed (*n* = 194, 55.7%), followed by those who strongly agreed (n = 39, 11.2%). For the statement, "Using GenAI improves my ability to personalize learning experiences," the largest group somewhat agreed (*n* = 167, 48.0%), followed by those who neither agreed nor disagreed (*n* = 118, 33.9%).

Participants also responded to items related to perceived risks. For the statement, "GenAI may produce inaccurate or overly general responses for students with diverse needs," participants (*n* = 149, 42.8%) somewhat agreed, 127 (36.5%) neither agreed nor disagreed, and 24 (6.9%) strongly agreed. Concern about overreliance was higher. For the

statement, "GenAI may lead teachers or students to rely on it too much," participants (*n* = 169, 48.3%) somewhat agreed, 82 (23.4%) strongly agreed, and 72 (20.6%) neither agreed nor disagreed.

For the statement, "GenAI may disadvantage some students more than others," the largest group somewhat agreed (*n* = 123, 35.3%), followed by those who neither agreed nor disagreed (*n* = 117, 33.6%). For the statement, "GenAI may work less well for some student groups than for others," the largest group somewhat agreed (*n* = 155, 44.5%), followed by those who neither agreed nor disagreed (*n* = 122, 35.1%).

Participants also varied in their confidence identifying biased GenAI outputs. The largest group neither agreed nor disagreed that they felt confident identifying biased GenAI outputs before using them with students (*n* = 153, 44.2%), followed by those who somewhat agreed (*n* = 128, 37.0%). In contrast, participants showed more agreement with the statement that "students with certain needs may be more likely to trust GenAI-generated responses without questioning them"; 158 of 350 participants (45.1%) somewhat agreed and 48 (13.7%) strongly agreed.

For institutional guidance, the largest group neither agreed nor disagreed (*n* = 111, 32.6%), followed by somewhat agreed (*n* = 95, 27.9%) and somewhat disagreed (*n* = 81, 23.8%). Finally, when asked whether they carefully review and revise GenAI-generated materials before using them with students, 156 of 344 participants (45.3%) somewhat agreed, and 100 (29.1%) strongly agreed. Table 2 presents the complete response distributions for each item.

Table 2: Educators' Agreement with Statements on GenAI Benefits, Risks, Bias, and Institutional Guidance

Statement	Strongly Agree	Somewhat Agree	Neither Agree nor Disagree	Somewhat Disagree	Strongly Disagree
Using GenAI helps me respond more effectively to diverse student needs.	12 (3.4%)	159 (45.4%)	133 (38.0%)	29 (8.3%)	17 (4.9%)
Using GenAI saves time when I prepare adapted or differentiated materials.	39 (11.2%)	194 (55.7%)	74 (21.3%)	24 (6.9%)	17 (4.9%)
Using GenAI improves my ability to personalize learning experiences.	19 (5.5%)	167 (48.0%)	118 (33.9%)	27 (7.8%)	17 (4.9%)
GenAI may produce inaccurate or overly general responses for students with diverse needs.	24 (6.9%)	149 (42.8%)	127 (36.5%)	41 (11.8%)	7 (2.0%)
GenAI may lead teachers or students to rely on it too much.	82 (23.4%)	169 (48.3%)	72 (20.6%)	19 (5.4%)	8 (2.3%)
GenAI may disadvantage some students more than others.	28 (8.0%)	123 (35.3%)	117 (33.6%)	64 (18.4%)	16 (4.6%)
GenAI may work less well for some student groups than for others.	19 (5.5%)	155 (44.5%)	122 (35.1%)	40 (11.5%)	12 (3.4%)

I feel confident identifying biased GenAI outputs before using them with students.	22 (6.4%)	128 (37.0%)	153 (44.2%)	33 (9.5%)	10 (2.9%)
Students with certain needs may be more likely to trust GenAI-generated responses without questioning them.	48 (13.7%)	158 (45.1%)	96 (27.4%)	35 (10.0%)	13 (3.7%)
My school or institution provides clear guidance on when and how GenAI should be used with students.	14 (4.1%)	95 (27.9%)	111 (32.6%)	81 (23.8%)	40 (11.7%)
I carefully review and revise GenAI-generated materials before using them with students.	100 (29.1%)	156 (45.3%)	61 (17.7%)	16 (4.7%)	11 (3.2%)

5.5 Relationships Among GenAI Variables

Spearman's rank-order correlations were used to examine relationships among GenAI training, familiarity, professional use, use for diverse student needs, confidence identifying biased outputs, and benefit-related agreement items. The strongest association was between participants' overall use of GenAI for diverse student needs and benefit-related agreement items, $\varrho = .54$, $p < .001$. Frequency of professional GenAI use was also positively associated with benefit-related agreement items, $\varrho = .38$, $p < .001$.

Familiarity with GenAI was positively associated with frequency of professional use, $\varrho = .42$, $p < .001$, and with confidence identifying biased GenAI outputs, $\varrho = .24$, $p < .001$. The amount of GenAI training participants reported receiving was positively associated with overall use of GenAI for diverse student needs, $\varrho = .20$, $p < .001$; confidence identifying biased outputs, $\varrho = .16$, $p = .002$; and frequency of professional use, $\varrho = .14$, $p = .011$.

Years of experience in education were not meaningfully associated with the selected GenAI use, training, benefit, or confidence variables. The strongest relationship was with frequency of professional GenAI use, but this association was weak and not statistically significant, $\varrho = -.10$, $p = .061$.

5.6 Concerns About GenAI and Diverse Student Needs

When participants described their concerns about using GenAI with students with diverse needs, 296 responses were coded. Seven themes emerged from the responses: (1) overreliance and dependency, (2) loss of critical thinking and reflection, (3) equity, bias, and exclusion, (4) inaccurate or unreliable content, (5) lack of personalization and standardized responses, (6) loss of human connection, and (7) privacy, sensitive data, or ethical safeguards. Two additional categories captured responses indicating no major concern and responses that were coded as other or unclear (see Table 3).

The most frequent concern that resonated from the open-ended responses was that of overreliance and dependency (n = 45, 15.2%). Participants described concerns that teachers or students could come to depend too heavily on GenAI rather than using it as

a support. For example, responses included words such as "dependency," "using it too much," and "becoming dependent." One participant described the concern as becoming accustomed to the tool and then not knowing "how to work without it."

Loss of critical thinking and reflection was the second most frequent theme (n = 36, 12.2%). These responses focused on the possibility that GenAI could reduce reflection, creativity, reasoning, or independent thinking. Participants referred to a "lack of reflection," "loss of creativity and reworking," and a "reduction in critical thinking." Another participant wrote that GenAI could reduce "students' ability to think."

Concerns about equity, bias, and exclusion appeared in 24 responses (8.1%). Rather than focusing only on the tool itself, these participants often connected GenAI use to broader access and inclusion issues. Some worried about unequal access to technology, while others described the possibility of biased outputs or supports that appear inclusive but do not actually meet students' needs. For example, some participants referred to "the risk of amplifying inequalities," noted that "not all people have equal access to these technologies," and warned of "superficial inclusion that actually excludes."

Inaccurate or unreliable content appeared in 19 responses (6.4%), with participants questioning whether AI-generated information could be trusted or used without careful review. Educator responses included statements such as "failure to check the truthfulness of the information," "incorrect information," and "the content of the material produced by AI is not appropriate."

A separate theme, lack of personalization and standardized responses, appeared in 17 responses (5.7%). In these cases, participants worried that GenAI could produce materials that were too generic or not sufficiently aligned with individual student needs. Some described this as "standardization," while others noted that the material may be "not perfectly calibrated to the needs of a student" or that it "does not provide materials tailored to specific cases."

Although less frequent, several responses pointed to concerns about the relational and ethical dimensions of GenAI use. For instance, a loss of human connection appeared in eight responses (2.7%). Participants used phrases such as "loss of human contact," "relating only to AI," and "I fear that technology could replace the human relationship." Privacy, sensitive data, or ethical safeguards appeared in three responses (1.0%). These participants specifically referenced "privacy," "sensitive data," and "respect for privacy regarding the insertion of sensitive data."

A separate category included participants who reported no major concerns (n = 39, 13.2%). These responses included statements such as "no concern," "none," and "I do not have any particular concerns." One participant explained that they did not have concerns because they "always monitor" students in the school environment. Finally, 105 responses (35.5%) were coded as other or unclear because they were too brief to interpret or did not clearly address the question.

Table 3: Themes Related to Concerns About GenAI and Diverse Student Needs

Theme or Response Category	**Definition**	***n* (%)**	**Representative Participant Excerpts**
Theme 1: Overreliance and Dependency	Concerns that GenAI may lead to excessive use, dependency, or reliance on the tool.	45 (15.2)	"Dependency." "Using it too much." "That one gets used to it and does not know how to work without it."
Theme 2: Loss of Critical Thinking and Reflection	Concerns that GenAI may reduce reflection, creativity, reasoning, original thinking, or autonomy.	36 (12.2)	"Lack of reflection." "Loss of creativity and reworking." "Reduction in critical thinking."
Theme 3: Equity, Bias, and Exclusion	Concerns that GenAI may reproduce bias, widen inequities, limit access, or exclude students who need support.	24 (8.1)	"The risk of amplifying inequalities." "Not all people have equal access to these technologies." "Superficial inclusion that actually excludes."
Theme 4: Inaccurate or Unreliable Content	Concerns about incorrect, unreliable, inappropriate, or unverified AI-generated information.	19 (6.4)	"Failure to check the truthfulness of the information." "Incorrect information." "The content of the material produced by AI is not appropriate."
Theme 5: Lack of Personalization and Standardized Responses	Concerns that GenAI may produce generic, standardized, or insufficiently individualized supports.	17 (5.7)	"Standardization." "Not perfectly calibrated to the needs of a student." "It does not provide materials tailored to specific cases."
Theme 6: Loss of Human Connection	Concerns that GenAI may reduce human contact, weaken teacher-student relationships, or replace support from real people.	8 (2.7)	"Loss of human contact." "Relating only to AI." "I fear that technology could replace the human relationship."
Theme 7: Privacy, Sensitive Data, or Ethical Safeguards	Concerns related to privacy, confidential information, sensitive data, or ethical safeguards.	3 (1.0)	"Privacy." "Sensitive data." "Respect for privacy regarding the insertion of sensitive data."
No Major Concern	Responses indicating no specific concern about GenAI.	39 (13.2)	"No concern." "None." "I do not have particular concerns because in the school environment I always monitor my students."
Other or Unclear	Responses that were too brief, unclear, or unrelated	105 (35.5)	"I do not know." "Use of AI." "General uncertainty."

5.7 Training and Resources Needed for Effective GenAI Use

When participants described the training or resources needed to use GenAI effectively for inclusive practice, 245 responses were coded. Six training and resource themes were

identified: (1) practical professional development, (2) concrete classroom examples and inclusive-use cases, (3) ethical and responsible-use guidance, (4) prompting support, (5) vetted tools and resource banks, and (6) human validation and critical review. Two additional response categories captured participants who indicated that no resource was needed, that they did not use GenAI, or that they were unsure, as well as responses coded as other or unclear (see Table 4).

The most frequent theme was practical professional development (n = 117, 47.8%). Participants described the need for training, courses, workshops, or other forms of professional preparation related to GenAI use. Some responses were general, such as "training courses," while others emphasized the need for "a practical training course," "free training for all teachers," "specialized courses," or "constant training on the subject."

Concrete classroom examples and inclusive-use cases appeared in 26 responses (10.6%). These responses focused on practical models, adapted materials, and classroom applications related to inclusive teaching. Participants mentioned the need for "examples of application in real contexts," "a specific course for inclusive teaching with AI," and "information about facilitated tasks with the help of compensatory tools."

Ethical and responsible-use guidance was identified in 17 responses (6.9%), with participants pointing to the need for guidance on ethics, privacy, verification, bias, and responsible implementation. Responses included "ethical use," "a more conscious use," and "verification of content." One participant also referred to the need for attention to the "protection of data and precision of generated content."

Prompting support appeared in 15 responses (6.1%). These participants wanted help learning how to ask GenAI appropriate questions or write prompts that would produce more useful responses. They referred to "targeted prompts," "knowing how to give the right prompt," and "what instructions to give AI to get responses corresponding to the real needs of students."

Relatedly, vetted tools and resource banks appeared in eight responses (3.3%). These responses pointed to a need for reliable tools, approved platforms, official guidance, or reviewed resources, including "specific AI tools," "different platforms," and "official guidelines."

Human validation and critical review appeared in two responses (0.8%). One participant wrote, "allow direct observation," while another described the need for "training, but always also comparison."

A separate response category included participants who indicated that no resource was needed, that they did not use GenAI, or that they were unsure what would be helpful (n = 18, 7.3%). Responses included "I do not use it," "I do not know specifically," and "none." Finally, 42 responses (17.1%) were coded as other or unclear because they were too brief to interpret or did not clearly identify a training or resource need.

Table 4: Themes Related to Training and Resources Needed for Effective GenAI Use

Theme or Response Category	Definition	*n* (%)	Representative Participant Excerpts
Theme 1: Practical Professional Development	Training, courses, workshops, or ongoing professional learning focused on how to use GenAI in education.	117 (47.8)	"Training courses." "A practical training course." "Free training for all teachers."
Theme 2: Concrete Classroom Examples and Inclusive-Use Cases	Practical examples, classroom models, or adapted materials showing how GenAI can support students with diverse needs.	26 (10.6)	"Examples of application in real contexts." "A specific course for inclusive teaching with AI." "Information about facilitated tasks with the help of compensatory tools."
Theme 3: Ethical and Responsible-Use Guidance	Guidance on using GenAI responsibly, including attention to ethics, privacy, bias, accuracy, and content verification.	17 (6.9)	"Ethical use." "A more conscious use." "Protection of data and precision of generated content."
Theme 4: Prompting Support	Support for learning how to write prompts or give instructions that lead to more useful and student-appropriate GenAI responses.	15 (6.1)	"Targeted prompts." "Knowing how to give the right prompt." "What instructions to give AI to get responses corresponding to the real needs of students."
Theme 5: Vetted Tools and Resource Banks	Reliable tools, approved platforms, official guidance, or resource collections that educators can use with more confidence.	8 (3.3)	"Specific AI tools." "Different platforms." "Official guidelines."
Theme 6: Human Validation and Critical Review	Emphasis on teacher review, direct observation, comparison, or professional judgment when using GenAI.	2 (0.8)	"Allow direct observation." "Training, but always also comparison."
No Resource Needed, Does Not Use, or Unsure	Responses from participants who did not identify a needed resource, did not use GenAI, or were unsure what would be helpful.	18 (7.3)	"I do not use it." "I do not know specifically." "None."
Other or Unclear	Responses that were too brief, unclear, or mixed to identify one main training or resource need.	42 (17.1)	"Suggestions." "It depends on the case." "Specific."

5.8 Use, Examples, and Appropriateness Decisions in Inclusive Practice

When participants described their GenAI use, examples, or appropriateness decisions in inclusive practice, 246 responses were coded, and five themes were identified. These included: (1) instructional planning and materials, (2) visual and communication supports, (3) student needs and appropriateness criteria, (4) language and translation supports, and (5) teacher review and critical evaluation. Two additional categories

captured responses indicating no current use of GenAI and responses coded as other or unclear (see Table 5).

The most frequent theme was instructional planning and materials (n = 62, 25.2%). Participants described using GenAI to plan instruction and to create, adapt, simplify, differentiate, or personalize instructional materials. Some responses were brief, such as "instructional planning," while others described "creating activities, collecting ideas" or the "organization of differentiated exercises." Several participants connected GenAI use to adaptation and accessibility more directly, including "simplification," "creation of personalized content," and "simplifying tests created for the class."

Other participants described GenAI as a way to create visual, multimedia, multimodal, or communication-based supports. This theme appeared in 30 responses (12.2%) and included examples such as "maps, combined with PowerPoint," "generating images," and "creating a book with clear images to support augmentative and alternative communication." One participant also described creating "stories with images for children with communication difficulties."

Appropriateness decisions were also present in the responses. Student needs and appropriateness criteria appeared in 14 responses (5.7%). In these cases, participants described making decisions about GenAI use based on student needs, learning goals, educational objectives, support plans, or the type of activity. Responses included "based on the student's needs," "based on the educational objectives," and "I evaluate the student's needs and the type of activity."

Language and translation supports appeared in eight responses (3.3%). Participants described using GenAI for translation, language adaptation, multilingual access, or language-level support. Examples included "translation," "language support," and "supporting audio and video with different levels of language."

Teacher review and critical evaluation appeared in six responses (2.4%). These participants emphasized that GenAI should be used with review, revision, comparison, guided analysis, or verification of outputs. Responses included "questioning the products and constructs provided by AI" and using GenAI "only as support, integrating it with guided activities and teacher verification."

A separate category included participants who indicated that they did not currently use GenAI for inclusive teaching or student support (n = 27, 11.0%). Responses included "I do not use it," "I have not used it," and "I have never used GenAI in my work as a support teacher." Finally, 99 responses (40.2%) were coded as other or unclear because they were too vague or difficult to interpret or they did not clearly address the question.

Table 5: Themes Related to GenAI Use, Examples, and Appropriateness Decisions in Inclusive Practice

Theme or Response Category	**Definition**	***n*** **(%)**	**Representative Participant Excerpts**
Theme 1: Instructional Planning and Materials	Use of GenAI to support lesson planning and the creation or adaptation of instructional materials.	62 (25.2)	"Instructional planning." "Creating activities, collecting ideas." "Organization of differentiated exercises."
Theme 2: Visual and Communication Supports	Use of GenAI to create visual, multimedia, multimodal, or communication-based supports.	30 (12.2)	"Maps, combined with PowerPoint." "Generating images." "Creating a book with clear images to support augmentative and alternative communication."
Theme 3: Student Needs and Appropriateness Criteria	Decisions based on student needs, goals, learning objectives, support plans, or appropriateness of the task.	14 (5.7)	"Based on the student's needs." "Based on the educational objectives." "I evaluate the student's needs and the type of activity."
Theme 4: Language and Translation Supports	Use of GenAI for translation, language adaptation, multilingual access, or language-level support.	8 (3.3)	"Translation." "Language support." "Supporting audio and video with different levels of language."
Theme 5: Teacher Review and Critical Evaluation	Use of GenAI with teacher review, revision, comparison, guided analysis, or verification of AI outputs.	6 (2.4)	"Questioning the products and constructs provided by AI." "Only as support, integrating it with guided activities and teacher verification."
Does Not Currently Use GenAI	Responses indicating no current use of GenAI for inclusive teaching or student support.	27 (11.0)	"I do not use it." "I have not used it." "I have never used GenAI in my work as a support teacher."
Other or Unclear	Responses that were too brief, unclear, mixed, or not specific enough to classify.	99 (40.2)	"At school." "Generally." "Use of digital tools."

6. Discussion

This study examined how Italian educators described the use of GenAI to respond to the diverse needs of students, including perceived benefits, risks, concerns about bias, training needs, and judgments about appropriate use. The findings provided insight into how educators evaluated GenAI use for particular students, tasks, and instructional contexts. Participants did not describe GenAI only as a tool for efficiency or innovation. Instead, they described decisions about GenAI use in relation to student needs, educational objectives, support plans, accuracy, bias, and the limits of AI-generated assistance.

A key finding in this study was the disconnect between educators' use of GenAI and the preparation they had received to use it effectively. Almost half of the participants reported receiving no training on GenAI. The qualitative data reinforced this finding, with "practical professional development" emerging as the most frequently identified training need. Rather than general information about GenAI, participants described a need for guidance they could apply in classroom settings, including examples of inclusive teaching, ethical guidance, prompting strategies, vetted tools, and the need for human review.

Participants viewed GenAI primarily as a practical tool to support documentation, lesson planning, and differentiation, which were the most frequently selected educational purposes. Across the frequency items, they reported using GenAI more often for adapting lesson materials, simplifying or rewriting text, accessibility-related tasks, and creating personalized examples or practice materials than using it for behavioral, social, or self-regulation needs. The participants in the study also described using GenAI to create visual supports, adapt instructional materials, and develop communication resources, illustrating how they applied the technology in their day-to-day inclusive practice. These findings extend the work of Van den Berg and du Plessis (2023), who examined ChatGPT's contribution to lesson planning in teacher education, by showing that educators in the present study reported using GenAI across a broader range of inclusive instructional tasks.

Participants also agreed that GenAI saved time when preparing adapted or differentiated materials and improved their ability to personalize learning experiences. These findings are consistent with De Giuseppe et al. (2026), who found that educators viewed GenAI as useful for differentiation, accessibility, and inclusive instructional support. Participants also expressed concerns that AI-generated materials could be inaccurate, too general, or insufficiently connected to individual student needs. Several participants described reviewing or adapting AI-generated materials before using them with students, indicating that they did not view GenAI as a substitute for their own instructional decision-making. Instead, participants viewed GenAI as a tool that supported educators' work while leaving decisions about how its outputs were used to the educator's professional judgment.

Participants' responses indicated that adapting materials is only one part of an educator's work. Meeting students' individual needs requires more than producing a modified worksheet or simplified text because educators must also consider the individual student, the instructional context, and the student's specific needs. In this study, some participants illustrated this work with examples from their own practice, such as adapting materials for a student with "DSA" or creating visual supports for communication. These examples demonstrate that GenAI may help generate ideas or draft resources, but educators ultimately decide whether those supports are appropriate for a particular student and learning context.

The strongest open-ended concern was overreliance and dependency, followed by loss of critical thinking and reflection. This concern was also reflected in the closed-ended responses, where many participants agreed that GenAI may lead teachers or students to

rely on it too much. These findings are consistent with Fan et al.'s (2025) description of "metacognitive laziness," in which learners increasingly rely on AI rather than actively regulating their own thinking.

Equity and bias were also common concerns among participants. Some participants worried that GenAI could increase inequalities, limit access, or contribute to "superficial inclusion that actually excludes." Others questioned whether AI-generated materials could adequately reflect individual students' strengths, communication styles, and support needs, raising concerns that generic responses might not provide meaningful support. The closed-ended responses also showed that many participants were uncertain whether GenAI might disadvantage some students or work less well for certain student groups. Many participants were also neutral or only somewhat confident in their ability to identify biased GenAI outputs before using them with students. These findings reinforce Holmes et al.'s (2022) argument that fairness, transparency, and human oversight should remain central when AI is used in educational decision-making. The educators also highlighted the importance of critically evaluating AI-generated responses rather than assuming they are accurate simply because they were generated by GenAI.

The correlation analysis also helped explain the relationships among GenAI training, familiarity, use, and confidence. Years of experience in education were not meaningfully associated with GenAI use, training, benefit-related responses, or confidence in identifying biased outputs. Instead, familiarity, training, and direct use were more closely related to how participants used and evaluated GenAI. The strongest relationship was between overall use of GenAI for diverse student needs and benefit-related agreement items, $\varrho = .54$, $p < .001$. Training was also positively related to overall use for diverse student needs and confidence in identifying biased outputs. Although these findings do not establish cause and effect, they suggest that educators' confidence and use of GenAI may be influenced more by AI-specific familiarity and preparation than by years of teaching experience.

Mimoudi and Mokhtari (2025) argued that effective use of GenAI requires educators to evaluate, interpret, and modify AI-generated responses when needed rather than simply accept them. Participants' responses in this study reflected this perspective as they raised concerns about accuracy, bias, privacy, and whether AI-generated responses were appropriate for individual students. These findings indicate that effective use of GenAI in inclusive practice requires more than knowing how to use the technology. Educators need preparation that helps them question AI-generated materials, revise them for instructional purposes, and determine whether they are appropriate before using them with students. As GenAI becomes more integrated into classroom practice, these decision-making skills may become as important as learning how to use the technology itself.

The gap between GenAI use and GenAI preparation also highlights the educator's role in inclusive practice. Participants' responses indicated that determining whether AI-generated outputs were appropriate required consideration of each student's individual needs, communication, and learning context. Many participants reported reviewing AI-generated materials before using them with students. In this sense, GenAI was viewed as

a tool that supported educators' work, while professional judgment remained the responsibility of the educator.

7. Limitations

This study has several limitations. First, the findings reflect the perceptions of educators in Italy who responded to the survey and should not be generalized to educators in other national or educational contexts. Because the study relied on self-reported survey data, the findings reflect participants' reported familiarity with GenAI, professional use, concerns, and decision-making rather than observed classroom practice or measured student outcomes.

Participation was voluntary, and participants could skip survey items. As a result, valid response counts varied across items, and open-ended responses differed in length and detail. Because of the large number of qualitative responses, representative excerpts were selected to illustrate each theme. These excerpts may not reflect the full range of participant perspectives within each category. Participants' open-ended responses were originally written in Italian and translated into English for reporting. Although the research team worked to preserve participants' meanings, translation may have affected wording, tone, or culturally specific meanings in the representative excerpts. Finally, the findings also reflect a particular period of GenAI adoption. As GenAI continues to evolve, access to tools, professional learning opportunities, institutional policies, and classroom practices may change.

8. Conclusion

This study examined both how educators used GenAI to support students with diverse needs and how they determined when its use was appropriate in inclusive practice. Future research should examine how educators evaluate AI-generated materials during classroom instruction, how students experience GenAI-supported resources, and whether these supports improve accessibility, participation, and learning outcomes for students with diverse needs. As GenAI continues to evolve, additional research is also needed to understand how educator preparation, professional learning, and institutional guidance influence its use in inclusive educational settings. Ultimately, the findings suggest that effective use of GenAI in inclusive practice depends not only on the technology itself but also on educators' professional judgment in deciding when, how, and whether it should be used.

Conflict of Interest Statement
The authors declare no conflicts of interest.

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