Perspectives on AI in Higher Education: Survey Insights from Teachers and Institutional Management

Maja Pušnik
Faculty of Electrical Engineering and Computer Science
University of Maribor
Maribor, Slovenia
maja.pusnik@um.si

Boštjan Šumak
Faculty of Electrical Engineering and Computer Science
University of Maribor
Maribor, Slovenia
bostjan.sumak@um.si

Saša Grašič
Faculty of Electrical Engineering and Computer Science
University of Maribor
Maribor, Slovenia
sasa.grasic@um.sii

Abstract

Artificial Intelligence (AI) is reshaping higher education by enabling personalized learning, improved accessibility, and inclusive teaching. This study presents survey results from higher education teachers, researchers, and administrators across European institutions, focusing on perceptions of AI in inclusive digital education. Respondents emphasized benefits such as stronger student engagement, personalized support, accessibility for learners with disabilities, and efficiency in lesson planning. AI was also recognized for fostering cultural and linguistic diversity. At the same time, concerns were raised about infrastructural gaps, limited training, over-reliance, and ethical risks related to bias, privacy, and academic integrity. The study concludes that AI can complement human-led teaching if supported by governance, teacher training, and inclusive design, with priorities including AI literacy, ethical safeguards, and equitable infrastructure.

Keywords

artificial intelligence; inclusive digital education; accessibility; higher education; teacher training; ethical AI

1 Introduction

Artificial Intelligence (AI) is increasingly regarded as a transformative force in education, providing tools for personalization, adaptive learning, and inclusive pedagogy [1]. At the same time, inclusive digital education has become a priority for higher education institutions (HEIs) and policymakers, ensuring equitable participation of students with diverse needs, including those with special educational needs and disabilities (SEND) [2]. This urgency is reflected in frameworks such as the UN Convention on the Rights of Persons with Disabilities, which guarantees inclusive, quality education [3], and UNESCO's definition of inclusion as reducing barriers and increasing participation [4].

Although AI shows strong potential for accessibility, adaptive learning, and assistive technologies, concerns persist around bias, privacy, and equitable access [5]. To address these issues, this study conducted a structured survey to capture stakeholder perspectives on AI in inclusive education, focusing on three dimensions: (i) benefits for students, (ii) benefits for teachers, and (iii) systemic challenges in technology, pedagogy, ethics, and culture. The objectives were to evaluate perceived benefits, identify risks, and propose evidence-based recommendations for responsible adoption.

The article is structured as follows: Section 2 reviews the theoretical background; Section 3 outlines the methodology; Section 4 presents survey results; Section 5 discusses implications; and Section 6 concludes with recommendations.

2 Theoretical Backgrounds

Inclusive digital education is based on the principle that all learners, regardless of physical, cognitive, or socio-emotional differences, should have equitable opportunities to participate. Guillemot, Lacroix, and Nocus describe digital inclusion as enabling students with disabilities to study alongside peers [1]. A milestone was the UN Convention on the Rights of Persons with Disabilities, which guarantees inclusive, quality education [3]. UNESCO defines inclusion as addressing learner diversity by reducing barriers and increasing participation [4].

Effective inclusion requires more than classroom placement. Slee stresses the need for structural reforms in curricula and pedagogy [6], while Reder [7] emphasizes access to devices, content, and digital literacy. The FCC and NDIA outline five essentials: affordable broadband, appropriate devices, digital literacy, support, and accessible applications [8]. Achieving digital equity demands systemic investment to remove barriers for disadvantaged groups [9].

Students with special educational needs and disabilities (SEND) often require adapted environments. UNESCO defines these learners as needing support to achieve their potential [4]. SEND categories include cognitive and learning disabilities, sensory and physical impairments, social and emotional needs, and communication difficulties [10]. The European Agency stresses flexible frameworks to ensure participation [11].

To implement inclusivity, Universal Design for Learning (UDL) provides three principles: multiple means of representation, action and expression, and engagement [12]. UDL encourages proactive design of flexible environments, improving outcomes for SEND and all students [13, 14].

AI intersects with these frameworks through adaptive and accessible tools such as tutoring systems, text-to-speech,

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captioning, and adaptive assessments [15]. It also supports teachers by personalizing content and automating tasks, though challenges remain in bias, data representation, and privacy [16, 17]. In this study, inclusive digital education, SEND, accessibility, and UDL form the theoretical lens for interpreting survey results and debating AI's role in equity.

3 Methods

This study used a quantitative survey to explore how higher education stakeholders perceive the benefits and challenges of artificial intelligence (AI) in inclusive digital education. The goal was to gather insights from teachers, researchers, and managers on AI adoption, its potential for inclusivity, and barriers to responsible use.

3.1 Survey instrument

The questionnaire was collaboratively developed by the AI-ENABLE project team, building on established frameworks of inclusive education and AI in educational practice. It consisted of four sections:

1. *Background* information – including gender, country, institutional affiliation, role, discipline, and years of teaching or research experience.
2. *Awareness* and use of AI tools – measuring familiarity with AI applications, types of tools used, and frequency of use.
3. *Perceived* benefits of AI – covering aspects such as accessibility, personalization, student engagement, collaboration, and teacher support.
4. *Perceived* challenges of AI – addressing technological, pedagogical, ethical, and cultural barriers.

Questions combined multiple-choice formats, Likert-scale ratings (1 = strongly disagree to 5 = strongly agree), and open-ended prompts to allow elaboration of personal experiences.

3.2 Participants

A purposive sampling strategy was applied to recruit respondents from higher education institutions participating in the AI-ENABLE project network. A total of 200 valid responses were collected. The sample comprised 109 female, 90 male, and 1 non-disclosed respondent. Participants often reported multiple roles: researchers (n = 162), teachers (n = 125), management/administrators (n = 60), and other roles (n = 39). Responses were distributed across institutions in several European countries, with the largest share from Ukraine (n = 97), followed by Spain (n = 31), Slovenia (n = 19), and Türkiye (n = 19). Academic disciplines ranged from humanities and social sciences to STEM fields, ensuring a diverse coverage of higher education contexts.

3.3 Data collection

The survey was administered online through a secure platform to maximize accessibility across devices. Participation was voluntary and anonymous. Respondents were informed about the study's purpose, and consent was obtained prior to completion. Data collection was carried out between March and June 2024.

3.4 Data analysis

The analysis proceeded in two stages. First, descriptive statistics were applied to summarize demographic information, AI adoption patterns, and the distribution of perceived benefits and challenges. Second, cross-tabulations and mean comparisons were performed to explore differences between subgroups (e.g., by role or country). In addition, open-ended responses were examined using qualitative thematic coding, allowing identification of recurring themes such as creativity support, ethical concerns, and institutional readiness.

This mixed quantitative–qualitative approach ensured both breadth and depth: statistical analysis enabled systematic comparisons, while qualitative insights enriched interpretation by capturing nuanced perspectives. The methodology thus provides a robust foundation for understanding how AI is currently perceived as both an enabler and a challenge in inclusive digital education.

4 Results

The survey provides detailed insights into how higher education teachers, researchers, and management staff perceive the integration of artificial intelligence (AI) in inclusive education. The findings are presented in terms of participant characteristics, patterns of AI adoption, perceived benefits for teaching and learning, inclusivity-related outcomes, and the main barriers that limit effective use.

4.1 Sample characteristics

A total of 200 respondents participated in the survey, comprising 109 females, 90 males, and one who preferred not to disclose gender. Most participants held more than one role, with 162 identifying as researchers, 125 as teachers, 60 as members of management, and 39 as other professionals. The largest institutional share came from a single university in Ukraine (n = 73), while additional responses were collected from a wide range of European higher education institutions.

Country-level data were reported by 166 participants. The majority came from Ukraine (97), followed by Spain (31), Slovenia (19), and Türkiye (19). Disciplines represented a broad spectrum of humanities, social sciences, and STEM, including fields such as philology, media studies, business, and design. Respondents also varied considerably in terms of teaching experience, with both early-career and senior professionals represented.

4.2 AI adoption, frequency, and tools

AI has already found broad uptake among academics. Of the 200 respondents, 138 reported using AI in their professional work, while 61 stated they do not, and one was unsure. Frequency of use was high: 49 respondents used AI daily, 81 several times a week, and 32 several times a month. Only a minority reported rare or no use.

General-purpose generative AI tools dominated, with ChatGPT cited by 165 participants. Other tools were used at lower levels, including Gemini (17), Copilot (5), Perplexity (4), Bard (4), Canva (4), GitHub Copilot (2), Wolfram Alpha (2), DALL·E (2), and Smodin (1). The most common academic applications included designing class materials (120), checking

knowledge (116), designing tests (105), conducting research for classes (74), scaffolding learning (62), and creating presentations (60). Specialized uses also appeared in domains such as nursing (50), programming (33), creative writing (31), and design (28)..

4.3 Perceived benefits for teaching

Educators consistently emphasized that AI supports teaching efficiency and quality. Respondents highlighted its usefulness in saving time through automated grading and plagiarism detection, enriching lesson planning by providing instant suggestions, and supporting curriculum development through the generation of teaching resources. Many also valued AI's ability to help create more diverse and inclusive materials, enabling them to better address student heterogeneity and accessibility needs.

4.4 Perceived benefits for students

Teachers generally agreed that AI enhances student learning through personalization, engagement, and improved outcomes. Respondents stressed that AI helps create more interactive and motivating environments via gamified exercises, quizzes, and simulations. Collaboration was another benefit, with AI tools enabling group work and interactive learning.

AI also supported study and research by helping students brainstorm, structure assignments, and synthesize large volumes of information. In addition, educators pointed to benefits for language practice and creative tasks, such as essay writing or script development. Overall, the consensus was that AI enables students to work more autonomously, while also complementing traditional teaching practices.

4.5 Benefits for inclusive education

Survey results confirmed that AI can act as a catalyst for inclusivity. Respondents highlighted four areas in particular: (i) accessibility, through tools such as text-to-speech, captioning, and alternative content formats; (ii) personalization, by adapting resources to specific learner needs; (iii) alternative communication, particularly for students with disabilities; and (iv) cultural and linguistic inclusivity, by enabling translation and adaptation of materials to diverse contexts. These findings indicate strong recognition of AI's role in supporting equity within higher education.

4.6 Challenges and barriers

Alongside optimism, participants expressed substantial concerns. Accessibility and personalization remain limited, as current tools often lack integration with assistive technologies and struggle to accommodate diverse disability profiles. Technical and financial barriers—such as high costs, interoperability problems, and infrastructure inequalities—were also widely noted.

Pedagogical risks emerged as another significant theme. Respondents expressed concern about student over-reliance on AI, erosion of critical thinking skills, and the potential for academic dishonesty. Ethical and privacy risks were frequently cited, with educators emphasizing the sensitivity of student data, risks of bias from non-representative training datasets, and the opacity of AI decision-making. Finally, some raised cultural concerns, warning that current tools may privilege Western perspectives and reduce meaningful human interaction in classrooms.

4.7 Training, resources, and governance

Across the sample, there was a strong call for systematic teacher training and AI literacy programs. Respondents emphasized that educators require not only basic familiarity with AI but also advanced training and ongoing professional development. Institutional support in the form of modern infrastructure, secure digital services, clear ethical guidelines, and transparent governance frameworks was likewise identified as essential for successful integration.

4.8 Student use and encouragement

Teachers reported that students are already using AI for tasks such as report writing, presentations, laboratory work, and creative assignments. Many educators encouraged this use, noting benefits such as time-saving, better organization, enhanced digital competence, and preparation for employment. Others, however, expressed reservations, particularly regarding plagiarism, uneven skill development, and the risk of over-reliance on AI-generated outputs.

5 Discussion

The survey findings provide an important snapshot of how higher education teachers, researchers, and management staff perceive the role of AI in inclusive education. Taken together, the results confirm both optimism about AI's potential to enhance teaching and learning and persistent concerns about infrastructure, ethics, and pedagogy.

5.1 AI as a supportive layer in academic practice

The high uptake of AI—particularly ChatGPT—demonstrates that generative AI has already become embedded in routine academic workflows. Teachers use it extensively for designing materials, preparing tests, and checking knowledge, while students rely on it for writing assignments, presentations, and laboratory work. This suggests that AI is increasingly perceived not as a novel experiment but as a practical tool that supports everyday academic practice. Importantly, respondents emphasized that AI should serve as a complement to human-led teaching rather than a substitute, aligning with human-centered and inclusive pedagogical principles.

5.2 Benefits for students and inclusivity

Respondents widely agreed that AI enhances student learning by providing personalized feedback, creating interactive experiences, and supporting research activities. Many highlighted its contribution to accessibility through captioning, text-to-speech, and adaptive content, which directly benefit students with disabilities. The ability of AI to adapt materials to different languages and cultural contexts was also seen as a strong enabler of inclusivity, allowing diverse student groups to participate more fully in learning. These findings underscore

AI's potential to bridge gaps in higher education, particularly for learners who might otherwise face systemic barriers.

5.3 Challenges and risks identified by educators

Despite this optimism, the survey also revealed widespread caution. Technical and financial barriers—such as high costs, infrastructure inequalities, and limited integration with assistive technologies—remain major obstacles. Pedagogical concerns were equally strong: respondents pointed to risks of over-reliance, reduced critical thinking, and academic dishonesty. Ethical challenges were identified as particularly pressing, with educators worried about student data protection, bias in training datasets, and opaque AI decision-making. Cultural issues, including the dominance of Western-centric perspectives and the potential reduction of meaningful teacher–student interaction, further complicate adoption. These concerns highlight that AI's benefits cannot be realized without systematic attention to governance, training, and inclusivity.

5.4 Implications for policy and practice

The findings suggest several directions for higher education institutions and policymakers. First, teacher training and AI literacy are critical to equip educators with the skills needed for responsible adoption. Second, institutional and national policy frameworks must provide clear guidance on ethics, privacy, and accountability. Third, targeted investment in infrastructure, assistive technology, and technical support is needed to avoid widening digital divides. Finally, inclusive design should remain central: AI tools must be evaluated not only for efficiency but also for their ability to promote equity, accessibility, and cultural diversity.

In summary, the survey shows that while AI is already reshaping higher education practice, its role as a driver of inclusive digital education will depend on deliberate strategies that combine technological innovation with pedagogical responsibility. Only by addressing the challenges identified by educators can AI become a sustainable enabler of equity in learning.

6 Conclusion

This study explored the perceptions of higher education teachers, researchers, and management regarding the role of artificial intelligence (AI) in inclusive digital education. Based on a cross-institutional survey, the findings highlight that AI tools are already widely used in academic practice, with general-purpose generative systems such as ChatGPT serving as the most common entry point. Educators acknowledged clear benefits for teaching and learning, including support for lesson planning, time savings, and enhanced student engagement. Students were seen to benefit through personalized learning, interactive materials, and accessibility features that reduce barriers for those with special educational needs and disabilities (SEND).

At the same time, the results underline significant challenges. Respondents emphasized technological and infrastructural barriers, the need for continuous teacher training, and ethical risks related to privacy, bias, and academic integrity. Concerns about cultural representation and the potential erosion of critical thinking further illustrate the complex environment in which AI adoption occurs. These limitations highlight that AI's transformative potential will only be realized if equity, inclusivity, and human-centered pedagogy remain at the forefront of its integration.

Looking ahead, three priorities emerge: (i) investment in AI literacy and professional development for educators, (ii) establishment of clear institutional and policy frameworks addressing ethics, transparency, and privacy, and (iii) targeted support for infrastructure and inclusive design practices to ensure equitable access. By addressing these priorities, higher education institutions can leverage AI not simply as a technological innovation but as a catalyst for building more adaptive, accessible, and inclusive learning environments.

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