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Enhancing higher education faculty engagement and inclusion through assistive technology

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As higher education continues to embrace diverse learning needs, the effective integration of assistive technology (AT) into instructional practices has become increasingly important. Despite its potential to promote accessibility and inclusivity, many faculty members lack a clear understanding of what constitutes AT and how to implement it effectively in the classroom. This study explored the challenges higher education faculty face in adopting AT, identifies knowledge gaps that hinder its use and proposes strategies for improving faculty preparedness through targeted professional development. Findings indicated that whilst faculty generally recognise the value of AT in creating inclusive education, its practical application is often limited by insufficient awareness, inadequate training and lack of institutional support. This study highlighted the need for a coordinated, campus-wide approach to AT implementation that includes faculty training, accessible support structures and the promotion of a culture that normalises the use of AT in higher education.

Keywords: accessibility; accommodations; professional development; training

'Assistive technologies are making postsecondary education a realized dream for many students with disabilities' (Guyer & Uzeta, 2009, p. 12).

As higher education increasingly embraces diverse learning needs, the integration of assistive technology (AT) into teaching practices has become a critical area of focus and study. However, a barrier to effective implementation remains that many faculty members may be unfamiliar with the definition of AT as well as how to use it effectively. This article will examine the challenges that higher education faculty face in adopting AT, explore the knowledge gaps that affect its use and propose professional development strategies for using AT in the higher education classroom.

Statement of the problem

In K–12 educational systems, students with disabilities are afforded protections under the Individuals with Disabilities Education Act (IDEA). This federal legislation mandates that all eligible students receive a Free Appropriate Public Education (FAPE) tailored to their individual needs. A key component of IDEA is the requirement for

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schools to develop and implement Individualised Education Programs (IEPs), which outline specific educational goals, services and accommodations necessary for the student's success (U.S. Department of Education, 2004). Amongst these accommodations, AT plays a critical role in supporting students with disabilities. Schools are obligated to provide AT, which may include tools such as speech-to-text software and specialised communication devices, at no cost to the family. This provision ensures that students can fully participate in and benefit from classroom instruction. Under IDEA, the responsibility lies with the school to identify, provide and fund the AT necessary for students to access the general education curriculum and achieve their IEP goals (Etscheidt, 2016).

However, once students graduate from high school or age out of K–12 systems, their legal protections and entitlements undergo a significant transition (Patterson & Cavanaugh, 2020). They are no longer covered by IDEA but instead fall under the authority of the Americans with Disabilities Act (ADA) and Section 504 of the Rehabilitation Act of 1973 (U.S. Department of Education, 2011). However, the burden of responsibility in postsecondary settings shifts to the individual. Students must self-identify as having a disability, register with the institution's disability services office and provide documentation of their condition. Only then can students request reasonable accommodations. This change in structure often presents challenges, as students must transition from a system where supports are automatically provided to one where supports are conditional and require self-advocacy (Guyer & Uzeta, 2009).

According to the U.S. Department of Education (1998), in postsecondary education, a 'reasonable' accommodation is the one that ensures meaningful and equal access for students with disabilities without placing excessive administrative or financial strain on the institution. Under Section 504 of the Rehabilitation Act of 1973 and Title II of the ADA, colleges and universities must provide or pay for AT when it is necessary for access. Whilst institutions are not required to offer the most advanced auxiliary aid available, the aid must effectively meet the student's needs. For students with limited experience using ATs, institutions should also provide appropriate training to ensure that these tools are used effectively. It should be noted that institutions of higher learning are not responsible for supplying personal devices or services such as hearing aids, prosthetics or help with daily living tasks like eating, bathing or dressing (Guyer & Uzeta, 2009).

History of Assistive Technology

In 1988, President Reagan signed into law the Technology-Related Assistance for Individuals with Disabilities Act, commonly referred to as the Tech Act of 1988 (U.S. Congress, 1988). In drafting this legislation, Congress recognised the significant role technology plays in simplifying tasks for individuals with disabilities. It emphasised how AT can enhance independence and participation in home, school, community and workplace settings alongside peers without disabilities. The act's primary goal was to raise awareness about the importance of AT devices and services for individuals with disabilities.

AT devices are defined as tools or equipment designed to increase, maintain or improve the functional abilities of individuals with disabilities. The Individuals with Disabilities Education Act (2004) expands on this definition, describing such devices as 'any item, piece of equipment, or product system, whether acquired commercially

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off the shelf, modified, or customised, that is used to increase, maintain, or improve functional capabilities of a child with a disability' (para. 1). These services include evaluating the student's needs, acquiring or adapting the device, performing maintenance or repairs and providing necessary training or technical assistance to both students and those supporting them (IRIS Center, 2025).

AT is typically designed to support students with disabilities, whereas educational technology serves a wider range of learners. This lack of clarity may contribute to confusion about the role of AT in the higher education classroom. 'Educational technologies differ from AT in that they simply refer to any technology implemented in the classroom rather than one implemented to circumvent a specific deficit' (Lamond & Cunningham, 2020, p. 97). Additionally, educator training on technology typically focused on general educational technology, not on AT.

Professional development for AT integration

A growing body of research highlights the need for expanded professional development in AT for educators. Alsolami (2022) found that 90.6% of special education teachers expressed interest in learning more about AT, preferring individualised instruction and workshops. This interest reflects a growing recognition of how AT can enhance learning outcomes for students with disabilities. Kowalewski and Ariza (2022) noted that whilst many colleges comply with ADA requirements through disability support offices, faculty still need professional development to effectively implement AT in classrooms. Similarly, Lamond and Cunningham (2020) revealed that although instructors generally hold positive views of AT, they lack confidence due to insufficient training, with AT knowledge influencing their perception of its usefulness. Finally, Zhou et al. (2012) recommended that universities offer AT-focused courses and integrate AT competencies into educator preparation programs. They advocated for professional organisations to provide ongoing inservice training, reinforcing the need for continuous AT education across the teaching career span.

Purpose of the study

The purpose of this study was to explore how AT is being integrated into college and university classrooms and to assess its influence on various aspects of academic practice. Specifically, the research examined the role of AT in supporting inclusive teaching strategies, improving accessibility for diverse learners and contributing to faculty members' ongoing professional development. Utilising a survey-based methodology, this study gathered insights into instructors' experiences, perceptions and challenges related to the adoption and use of assistive technologies in higher education settings. The findings were intended to guide the development of strategies that strengthen faculty engagement and promote more inclusive learning environments through the effective implementation of AT.

Instruments

The researchers designed a survey instrument to examine how AT is being integrated into higher education classrooms and to evaluate its impact on academic practices. The survey consisted of 19 items: 15 closed-ended questions and four open-ended

questions. The open-ended items were crafted to be neutral, clear, singular, non-dichotomous and grounded in an emic perspective. These questions were structured to uncover existing themes and patterns within participants' responses. Before the study began, the researchers received Institutional Review Board (IRB) approval by the institution. Data collection took place over a 4-week period with the survey distributed via Google Forms to allow for flexible, asynchronous participation. The survey questions, which correspond to the four section domains, are presented in Table 1.

Methodology

The participants in this study were full-time and part-time faculty members from a private university in New Jersey. The sample represented a range of academic disciplines and teaching levels, though it was not fully representative of the entire faculty population. Purposive sampling was employed to select participants who had taught or were currently teaching in a higher education setting, drawn from a pool of instructors at one private university in New Jersey. A total of 70 faculty members participated in the survey, representing a broad spectrum of academic disciplines and teaching levels. The survey was distributed to 450 faculty members.

Demographics

A majority of the participants were full-time faculty (57.1%), whilst 42.9% were part-time. In terms of the student levels taught, nearly half (48.6%) focused on undergraduate students, with 25.7% teaching graduate students and an equal percentage (25.7%) teaching both undergraduate and graduate levels. When it came to years of teaching experience, the largest group (32.9%) had been teaching for 21 or more years, followed by 21.4% with 11–15 years of experience. Additionally, 20% had taught for 6–10 years and 14.3% for 16–20 years, whilst 11.4% had taught for less than 5 years. Regarding age distribution, the largest proportion of participants were aged 65 or older (35.7%), followed by those aged 46–55 (22.9%) and 56–65 (17.1%). Fewer participants fell into the younger age groups, with 12.9% aged 36–45, 5.7% aged 26–35 and just 1.4% aged 25 or younger. A small percentage (4.3%) chose not to answer the age question.

Results and analysis

Quantitative data

The survey included 15 multiple-choice items, with participants selecting the option from a predetermined list that best described their experience for each question. Based on the multiple-choice questions, eight key themes emerged from the data: (1) Familiarity and Awareness of Assistive Technology, (2) Inconsistent Use of AT in Instruction, (3) Mixed Perceptions of AT's Effectiveness on Student Engagement, (4) Support for AT's Role in Promoting Inclusive Learning, (5) Lack of Access and Knowledge About Available AT Resources, (6) Insufficient Training and Institutional Support, (7) Attitudes Towards Recommending Assistive Technology and (8) Commonly Used AT Tools Reflect Accessibility Priorities.

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Table 1. Informed consent and survey questions on assistive technology use in higher education

Section	Question	Survey questions/prompts
Informed Consent	N/A	By clicking the 'I agree to Participate' button below, I confirm that I have read this form and decided that I will participate in the project described above. Its general purposes, the particulars of involvement and possible risks and inconveniences have been explained to my satisfaction. I understand that I can discontinue participation at any time. My consent also indicates that I am at least 18 years of age.
Demographics	Question 1	What is your teaching status? (Full-time, Part-time, Adjunct, Other)
Demographics	Question 2	What level of students do you teach? (Undergraduate, Graduate, Both)
Demographics	Question 3	How many years have you been teaching in higher education?
Demographics	Question 4	How old are you?
Experience with Assistive Technology		Please choose the item that best describes your experience for each of the following questions.
Experience with Assistive Technology	Question 5	How familiar are you with assistive technology for educational purposes? (Not familiar, Somewhat familiar, Familiar, Very familiar)
Experience with Assistive Technology	Question 6	Have you ever used assistive technology in your teaching? (Yes/No)
Experience with Assistive Technology	Question 7	How often do you integrate assistive technology in your teaching methods? (Never, Rarely, Sometimes, Often, Always)
Experience with Assistive Technology	Question 8	How effective do you find assistive technology in enhancing student engagement? (Not effective, Slightly effective, Moderately effective, Very effective)
Experience with Assistive Technology	Question 9	Do you believe assistive technology contributes to a more inclusive learning environment? (Yes/No/Unsure)
Experience with Assistive Technology	Question 10	Have you observed an improvement in student performance when assistive technology is used in the classroom? (Yes/No/Not sure)
Experience with Assistive Technology	Question 11	How easy is it for you to access assistive technology resources provided by your institution? (Very difficult, Somewhat difficult, Neutral, Somewhat easy, Very easy)
Experience with Assistive Technology	Question 12	How satisfied are you with the training and support provided by your institution for using assistive technology? (Very dissatisfied, Dissatisfied, Neutral, Satisfied, Very satisfied)
Experience with Assistive Technology	Question 13	Do you think more training on assistive technology would enhance your teaching? (Yes/No/Maybe)
Experience with Assistive Technology	Question 14	Would you recommend the use of assistive technology to your colleagues? (Yes/No)

Table 1. (Continued)

Section	Question	Survey questions/prompts
Device Use	Question 15	Please select any assistive technology device used in your classroom. (Select all that apply: Screen Readers, Speech-to-Text Software, Braille Displays, Hearing Aids and FM Systems, Note-Taking Devices and Software, Alternative Keyboards and Mice, Text-to-Speech Software, Screen Magnifiers, Closed Captioning Services, Digital Recorders, Assistive Listening Devices, Accessible eBooks and Audiobooks, Voice Recognition Software, None, Other: please specify)
Open-Ended	Question 16	How can assistive technology enhance the inclusivity of your classroom?
Open-Ended	Question 17	What challenges have you encountered when integrating assistive technology into your teaching?
Open-Ended	Question 18	What types of assistive technologies are most needed at your institution?
Open-Ended	Question 19	What training or resources are needed to improve your use of assistive technology in the classroom?

Note. Participants must be at least 18 years of age to provide informed consent. Survey questions assess knowledge, experiences and perceptions of assistive technology integration in higher education classrooms.

Familiarity and awareness of AT

The survey item measuring educators' familiarity and usage of AT revealed a wide range of responses. According to the survey results, 15.7% of instructors reported being very familiar with AT for educational purposes, whilst half of the respondents (50%) indicated they were somewhat familiar. A smaller portion (5.7%) expressed neutrality on the subject, suggesting a moderate level of awareness but no strong stance on their familiarity. However, 25.7% of respondents reported being not very familiar with AT, and 2.9% stated they were not at all familiar. The results showed inconsistent familiarity and awareness of AT amongst educators, with many expressing uncertainty or limited understanding.

Inconsistent use of AT in instruction

When asked whether they had ever used AT in their teaching, 51.4% of participants have used AT in their instructional practices, whilst 32.9% have not. Additionally, 15.7% of respondents were unsure if they had utilised AT, suggesting that some educators may not be fully aware of the tools they have employed or may not recognise certain technologies as assistive.

Another item on the survey asked the instructors how frequently they integrate AT into their teaching. The responses varied, with 4.3% of participants indicating they always use AT, whilst 17.1% reported using it often. A larger group, 24.3%, stated they integrate AT sometimes, suggesting occasional use depending on the context or student needs. However, a significant portion, 30%, indicated they rarely use AT, and 24.3% reported never using it at all. These results demonstrated that AT is used sporadically and inconsistently across classrooms, suggesting a lack of integration into daily teaching practice.

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Perceptions of AT's effectiveness on student engagement

The survey results provide insight into participants' perceptions of the effectiveness of AT in enhancing student engagement. Amongst respondents, 12.9% found AT to be *very effective*, and an additional 31.4% rated it as *somewhat effective*, suggesting that nearly half of the participants (44.3%) recognise some level of positive impact. Conversely, only 1.4% considered it *not very effective*, and none rated it as *not at all effective*, indicating minimal negative perceptions. However, a notable proportion (18.6%) reported a *neutral* stance, and the largest group (35.7%) selected 'I do not know', reflecting a significant degree of uncertainty or lack of familiarity with the topic amongst participants.

When asked about the impact of AT on student performance in the classroom, the majority of respondents were uncertain, with 37.1% selecting 'I do not know'. Amongst those who expressed an opinion, 10% reported a significant improvement in student performance, whilst 27.1% indicated a somewhat positive effect. Additionally, 18.6% of respondents remained neutral, showing no clear opinion on the matter. A smaller portion of participants observed no significant impact, with 5.7% responding negatively and 1.4% stating there was no impact at all. These findings indicate a general mixed perception regarding the effectiveness of AT in improving student performance. A notable portion of respondents (37.1%) indicated that they did not know whether AT improved student performance in the classroom. Survey responses revealed that educators remain uncertain about the effectiveness of AT in improving student engagement and academic performance.

Support for AT's role in promoting inclusive learning

The survey results indicated that the majority of respondents (92.9%) believe AT enhances inclusivity in learning environments, whilst 7.1% disagreed. With 92.9% of respondents affirming its contribution, it is clear that most educators recognise the value of these tools in supporting diverse learners, particularly those with disabilities. This overwhelming agreement reflects a broader trend in higher education, where AT is seen as essential in ensuring equitable access to learning opportunities. The results revealed that educators recognise AT's value in creating inclusive learning environments, even if their own use or understanding is limited.

Access and knowledge about available AT resources

2.9% reported that accessing AT resources was very easy, whilst 22.9% found it easy. In contrast, 28.6% of respondents were neutral, indicating no strong opinion on the accessibility of these resources. A combined total of 8.6% (4.3% for difficult and 4.3% for very difficult) expressed challenges in accessing the resources. However, a significant portion of respondents, 37.1%, indicated that they did not know, suggesting either a lack of awareness about available resources or limited exposure to them. AT resource availability is unclear or difficult to access, pointing to the need for centralised support.

Training and institutional support

The findings from the survey on the item asking about satisfaction with the training and support provided for using AT at the institution reveal a mixed response.

A majority of participants, 62.9%, reported being neutral, suggesting that whilst they may not feel strongly positive or negative, there is room for improvement in the support provided. The combined percentage of those who are either 'very satisfied' (5.7%) or 'satisfied' (24.3%) indicates that a smaller portion of users are content with the current offerings. However, a notable 7.2% expressed dissatisfaction, with 4.3% reporting being dissatisfied and 2.9% very dissatisfied. These results highlight a potential gap in the effectiveness or accessibility of training and support for AT, suggesting the need for further evaluation and enhancement to better meet users' needs. With 62.9% of respondents indicating a neutral stance, it implies that a significant portion of users may not feel sufficiently equipped or supported, or that the training and resources provided are not clearly meeting their expectations. The survey results could also suggest that the high percentage of neutral responses (62.9%) might indicate that many participants are unsure about what AT is, or how it could be integrated into their daily tasks.

The majority of respondents (67.1%) believe that more training on AT would enhance their teaching. This suggests that educators recognise the value of incorporating technology to support diverse learning needs and promote greater accessibility in the classroom. The response reflects a growing awareness of how assistive tools can facilitate personalised learning, improve student engagement and help bridge gaps for students with disabilities. A smaller proportion of respondents (8.6%) do not feel additional training is necessary, whilst 24.3% are uncertain. This indifference towards current AT training efforts suggests institutions are not adequately preparing faculty to implement AT. However, educators are open and motivated to learn more about AT and recognise its potential even when current practices are limited.

Attitudes towards recommending AT

When asked whether participants would recommend the use of AT to their colleagues, the majority of respondents (40%) expressed a strong endorsement, choosing 'Definitely'. An additional 30% indicated that they would 'Probably' recommend it, suggesting a generally positive outlook on the benefits of AT. However, 25.7% were uncertain, reflecting some hesitation or lack of clarity on its potential advantages. A smaller portion, 4.3%, leaned towards 'Probably not' and no one selected 'Definitely not'. This theme reflects the strong overall support for AT amongst educators, whilst also highlighting that a significant portion of respondents (25.7%) remain uncertain. This indicates a need for increased awareness, training and clearer evidence of its effectiveness.

Commonly used AT tools reflect accessibility priorities

The most common AT tools include accessible eBooks and audiobooks, selected by 40% of participants, highlighting their significant role in supporting students with reading disabilities. Similarly, closed captioning services (32.9%) and digital recorders (31.4%) are widely used, benefiting students with hearing impairments and those who need to review lecture materials. Note-taking devices and software (30%) are also frequently employed, assisting students in organising and capturing classroom content effectively. Moderately utilised technologies include screen magnifiers (24.3%),

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text-to-speech software (22.9%) and speech-to-text software (20%), each aiding students with visual, reading or learning challenges. Less frequently used tools include screen readers (18.6%) for visually impaired students as well as voice recognition software (12.9%) and hearing aids or FM systems (12.9%) for those with mobility or hearing impairments. Alternative keyboards and mice (10%) are available for students with physical disabilities, and assistive listening devices (11.4%) help enhance hearing in classroom settings. Braille displays (5.7%) see limited use, likely reflecting a smaller population of students who read Braille. Rarely used technologies include recorded lectures (2.8%) and LLM-based generative AI (1.4%), the latter likely reflecting its emerging status in education. Notably, 28.6% of participants reported never using AT devices in their classrooms. The results indicate that educators primarily use familiar and easily accessible AT tools, whereas more specialised tools are significantly underutilised.

Qualitative data

The survey contained four open-ended questions. There were several themes that emerged from this data: (1) Inclusivity and Equal Access, (2) Challenges, (3) Essential Tools and (4) Comprehensive Support and Guidance.

Inclusivity and equal access

Many participants highlighted the role that AT plays in ensuring equal access to educational content and creating participation amongst all students, including those with disabilities. Technologies like closed captioning, text-to-speech software and accessible eBooks were frequently mentioned for their ability to accommodate students with hearing or reading difficulties, allowing them to engage with course material in ways that suit their needs. Several participants acknowledged that AT creates independence amongst students.

Challenges

Participants noted issues related to a lack of training for students and instructors. There were concerns about the time-consuming nature of setting up and recording lectures, as well as the occasional malfunctioning of technology. Some respondents mentioned compatibility issues with existing systems and the challenge of meeting diverse student needs with customised tools. Additionally, participants expressed frustration with the lack of support, resources and guidelines for acquiring AT. Several respondents discussed the availability and accessibility of resources, with some instructors noting that not all texts or tools were available or easy to use, and some students were reluctant to purchase necessary ebooks. Finally, a few participants raised concerns about the overuse of assistive technologies and the potential for students to become reliant on them.

Essential tools

The third open-ended question regarding the most needed ATs at participants' institutions revealed a range of suggestions and perspectives. Many participants

expressed uncertainty or lack of experience with specific technologies at their institutions, whilst others highlighted essential tools such as screen readers, magnification software, speech-to-text and text-to-speech tools. These were seen as critical for supporting students with visual impairments, learning disabilities and orthopaedic impairments. Closed captioning, transcription services and language translation tools were also frequently mentioned, especially for students with hearing impairments or those who are non-native English speakers. Additionally, several respondents noted the need for accessible eBooks, audiobooks and digital pens for note-taking. There was also recognition of the importance of training for both faculty and students.

Comprehensive support and guidance

The responses to the fourth open-ended question regarding the training or resources needed to improve the use of AT in the classroom reveal a strong demand for more comprehensive support and guidance. Many participants expressed a need for workshops and online resources such as YouTube tutorials, video guides and step-by-step manuals. Faculty training on accessibility best practices and the integration of AT into teaching was emphasised. Some respondents suggested hands-on learning opportunities, such as webinars, virtual professional development and the chance to try out different technologies. There was also a call for more training, specifically when a student requires a particular AT. Additionally, participants highlighted the need for clearer communication about the technologies available at their institutions.

Discussion & implications

Awareness of AT

The study findings indicated that there was a lack of awareness regarding the nature of AT. This foundational gap in knowledge suggests that individuals were unaware of potential solutions that could enhance learning and accessibility. A significant portion of respondents indicated that they did not know what AT was or how to effectively integrate it into their teaching practices. One respondent admitted, 'I honestly have to learn about assistive technology'. Fifteen respondents answered the question, 'How can assistive technology enhance the inclusivity of your classroom?' with the response, 'I do not know or uncertain'. This lack of knowledge suggests a significant gap in awareness and understanding of AT amongst the survey respondents.

Research (Alsolami, 2022; Lamond & Cunningham, 2020; Wynants & Dennis, 2017) has highlighted a need for targeted professional development in AT. 15.7% of instructors consider themselves very familiar with AT, and a combined 28.6% report low or no familiarity, suggesting that significant gaps in knowledge persist. Many instructors report only occasional use of AT or uncertainty about whether they have used it at all, which may reflect a lack of clear definitions or training around what constitutes AT. 67.1% of participants expressed that additional training would improve their teaching, whilst 70% indicated they would recommend AT to colleagues. These findings implicate the importance of

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increased professional development to build awareness and effective use of AT in higher education.

Use of AT devices

Although a majority of respondents (45.7%) indicated they have used AT in their teaching, the frequency of use remains relatively low, with only 4.3% using it consistently and 54.3% reporting rare or no use. Faculty may require not only exposure to available ATs but also guidance in selecting tools that align with diverse student needs and instructional goals. The data also reveal strong support for the inclusive potential of assistive technologies, with 92.9% of respondents affirming their belief in AT's role in enhancing accessibility and equity. This broad consensus supports institutional initiatives, as faculty appear open to engaging with these tools when adequately supported. The data show a need for hands-on training to help instructors feel more confident and capable using AT. As Zhou et al. (2012) noted, institutions can support AT use by offering increased access to training and professional development.

Accessing AT devices

Accessing AT devices was another concern amongst many participants. There was confusion about the procedures for obtaining AT tools, the resources available for support and the proper channels for implementation. Whilst some participants found the process relatively easy (11%), a large portion (35%) expressed a lack of knowledge regarding how to obtain these resources. Over one-third of respondents (37.1%) did not know how to access AT resources at their institution, and an overwhelming 62.9% expressed neutrality regarding satisfaction with existing support. The fact that 32.9% of respondents have never used AT devices in their classrooms highlights missed opportunities and reflects a need for more instructional planning. One respondent explained, 'It is difficult to know where to get them. There is no established policy for acquiring the devices. Clear and detailed guidelines are needed to explain how to obtain the materials. Also, training is an issue. Training should be offered on an ongoing basis, with both in-person and online options available to faculty and students'. Another faculty member claimed, 'My biggest challenge is that I do not always know that a student needs AT. I have had students over the years that do not do a great job of advocating for themselves and I find out they need support a few weeks (or months) into the semester'.

Use of AT devices and student performance

A large percentage of respondents (45%) indicated they did not know if AT was having a positive impact, and 18.6% remained neutral on the matter. Many of the faculty (21%) replied 'I do not know' when asked 'How can assistive technology enhance the inclusivity of your classroom?' Some faculty expressed a concern that employing AT requires a significant investment of time. One stated, 'Teaching students to use the AT can often take a lot of time'. Another instructor explained, 'Not really sure how to

use it and when'. One respondent even asked, 'Am I using an assistive technology device correctly in my classroom?'

Limitations

Sampling

A limitation of the study was the use of purposive sampling, which may not fully represent the broader population of faculty members at all universities around the world. This study was limited to one university in the United States of America. Also, within the actual university, the 15% response rate presents some limitations in determining how well the results reflect the views of all faculty members.

Reporting

Additionally, the self-reported nature of the survey responses may have introduced response bias. For example, a faculty member who has minimally used AT may perceive themselves as highly skilled in AT, resulting in a response that does not accurately reflect their level of experience. Also, if only those educators with strong opinions (either positive or negative) about AT responded, the results may not accurately represent the views of the entire group. Nonresponse bias could have distorted the findings if certain groups (such as those who have no experience with AT or who do not feel strongly about it) are underrepresented in the responses.

Technical issues

Technical issues associated with the survey platform (Google Forms) or institutional email systems could have contributed to nonresponse amongst some faculty members. Issues such as difficulties accessing or navigating the survey platform, emails being filtered into spam folders or overlooked messages may have prevented potential participants from completing the survey.

Conclusion

In conclusion, this study identified themes for higher education instructors regarding AT use in the classroom, including a lack of awareness about AT, uncertainty about how to access AT and concerns about its effective use. These findings highlight the need for increased strategies to improve faculty training and professional development, clear guidance and support, and integrated accessibility practices. Furthermore, once AT is adopted by an institution, it is essential to implement a comprehensive evaluation process to monitor its effectiveness. This process should assess how well the student is interacting with the device, the extent to which it supports their academic engagement and whether it is effectively meeting their unique learning needs. Ongoing feedback from the student and instructors should be gathered to determine if any adjustments, training or alternative tools are necessary to ensure optimal outcomes. By addressing these issues, higher education institutions can better equip faculty to use AT effectively, creating a more inclusive and accessible

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learning environment for all students and promoting equity and academic success across diverse learner populations.

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Conflict of interest

The authors affirm that no commercial or financial relationships exist that could be interpreted as a potential conflict of interest in the conduct of this research.

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