

The Current Status of Technology in Postsecondary Programs for Students with Intellectual and Developmental Disabilities

Taliah Ales, Ph.D.

Department of Learning Technologies, University of North Texas

Dave Edyburn, Ph.D.

Rehabilitation Research Design & Disability Center, University of Wisconsin-Milwaukee

Miriam C. Boesch, Ph.D.

Department of Educational Psychology, University of North Texas

Timothy McMahan, Ph.D.

Department of Learning Technologies, University of North Texas

Abstract

Postsecondary education programs for students with intellectual and developmental disabilities play an increasing role in expanding access to academic and career pathways; however, limited information is available on programs' technology integration practices. This national survey examined the program characteristics and types of technology integrated across programs. Results reveal high integration of learning management systems and productivity tools, while assistive technologies were less readily available and often required student requests. Findings may inform program planning and policy to improve accessibility, academic preparation, and ensure that programs are equipped to support student success in both higher education and the workforce.

Keywords: postsecondary education, intellectual and developmental disabilities, technology integration, assistive technology, digital accessibility

Plain Language Summary

- College programs for students with intellectual and developmental disabilities use technology to support learning, communication, and daily tasks. Little is known about what technology these programs use or how students get access to it.
- **What we did in this study:** We surveyed 41 college program administrators from across the United States. We asked about program features, general technology tools, assistive technology, and device availability.
- **Findings:**
 - Many programs used online learning systems, office software, communication tools, presentation tools, and video tools.

- Few programs had specialized assistive technologies readily available.
- Administrators were more familiar with common digital tools than advanced instructional tools.
- In many programs, students had to request assistive technology.
- Nearly all programs expected students to bring their own devices.
- **Conclusion:** Many programs have basic technology in place, but access to assistive tools and devices is uneven. These findings can help programs improve support for students, build staff knowledge, and make accessibility part of daily instruction.

Postsecondary education programs for students with intellectual and developmental disabilities (IDD) have emerged as a pathway to support access to academic study, campus life, and employment preparation. These programs differ in design, with some offering inclusive coursework attended alongside traditional students, while others emphasize structured instruction focused on independent living, vocational readiness, and social development. Many programs incorporate peer mentoring, academic accommodation, and work-based learning to promote engagement and inclusion (Becht et al., 2020; Grigal & Hart, 2010; Grigal et al., 2022; Think College, 2024). The expansion of postsecondary opportunities for students with IDD reflects changes in federal disability policy over the past century. Inclusion efforts gained momentum following World War II, with Section 504 of the Rehabilitation Act of 1973 marking a shift toward accessibility in education (Dukes et al., 2017). In K-12 settings, the Individuals with Disabilities Education Act (IDEA) mandated access to individualized services, reinforcing legal support for accommodations and educational access (20 U.S.C. §§ 1400 et seq.; 29 U.S.C. § 794). The Higher Education Opportunity Act of 2008 created the Transition and Postsecondary Programs for Students with Intellectual Disabilities (TPSID), advancing inclusive models in higher education (U.S. Department of Education, 2015).

Differences in federal policy between K-12 and higher education are reflected in the reduced support structures available to students with IDD at the postsecondary level. While K-12 institutions are required under IDEA to provide individualized supports through services such as an Individualized Education Program, postsecondary institutions operate under distinct legal frameworks and are not mandated to offer comparable services. Additionally, faculty and administrators may have limited awareness of legal responsibilities or the needs of students with non-apparent disabilities, including Attention-Deficit/Hyperactivity Disorder (ADHD) and learning disabilities (Sniatecki et al., 2015; Stevens et al., 2018). This lack of familiarity can hinder accommodation efforts and restrict access to academic and social opportunities. Students with IDD entering higher education frequently encounter challenges in adjusting to new learning environments, often arriving with limited experience in self-directed learning, system navigation, and independent decision-making (Garrison-Wade, 2012; Stokoe et al., 2024; Timmis et al., 2024). Navigating implicit expectations, commonly referred to as the hidden curriculum, requires proficiency in areas such as communication, participation, and self-advocacy

(Berg et al., 2017). Without explicit guidance, students may struggle to interpret these expectations, affecting their ability to fully engage in academic and social contexts.

Technology offers potential support for students with IDD in addressing these challenges. Tools such as text-to-speech software, voice recognition, and screen readers promote access to digital content and support engagement with coursework (Baker et al., 2019; Baxter & Reeves, 2023; Fajardo et al., 2022). Emerging technologies, including adaptive learning systems and generative artificial intelligence, provide new opportunities for personalization and expression (Alam, 2022; Halkiopoulou & Gkintoni, 2024). However, the integration of these tools may be influenced by institutional variables, including program size, staffing, and leadership priorities (Becht et al., 2020). Faculty training further shapes how technology is used in practice. Research indicates that professional development enhances instructors' ability to integrate technology effectively and align its use with pedagogical goals (Ertmer & Ottenbreit-Leftwich, 2010; Lidolf & Pasco, 2020). Nevertheless, disparities in access and digital competence persist. These gaps, often referred to as the digital divide, extend beyond hardware availability to encompass differences in digital literacy, problem-solving ability, and familiarity with technology (Organisation for Economic Co-operation and Development, 2023; Reddy et al., 2020; Van Dijk, 2017). Addressing these disparities requires alignment with inclusive design frameworks, including the Web Content Accessibility Guidelines and Universal Design for Learning (CAST, 2024; World Wide Web Consortium, 2025).

Technology readiness is increasingly relevant to workforce participation and civic life. Proficiency in digital tools, including assistive technologies, supports both career development and independent living (U.S. Department of Labor, 2020). Despite the growing relevance of these tools, limited research has examined technology integration within higher education programs for students with IDD. However, empirical research has focused on determinants of educational technology adoption in general higher education along with factors influencing technology use across university contexts, including institutional support, perceived usefulness, and ease of use (Feng et al., 2025; Fisseler & Seale, 2025). Furthermore, national reports describe enrollment trends, course delivery formats, and credential attainment, but provide limited insight into systematic technology use beyond noting delivery modes such as in-person or hybrid instruction (Grigal et al., 2023). When technology is addressed, existing studies examine assistive and everyday tools that support specific skills, such as time management through mobile devices or prompting applications. These reviews often report positive outcomes but highlight inconsistent implementation and a lack of evidence regarding environmental factors that influence technology adoption (Baker et al., 2019; Fernández-Batanero et al., 2022; Walters et al., 2021).

The current study addresses the gap in two important ways. First, it examines how foundational technologies such as learning management systems, accessible tools aligned with assistive technology and Universal Design for Learning, and emerging innovations, such as AI-enabled supports, are integrated across a national sample of programs for students with IDD. Second, it explores how program-level characteristics, including staffing structures, faculty development, and institutional priorities, may be associated with technology integration. The following discussion and recommendations

highlight the value of program-level approaches to technology use that align with evolving models of teaching and learning. This study also contributes to the understanding of technological tools currently implemented in the instructional environments of inclusive postsecondary education programs, offering insight into existing practices and informing future research, policy development, and program-level outcomes. The following research questions guide the investigation:

- What are the institutional and demographic characteristics of postsecondary education programs for students with intellectual and developmental disabilities?
- What technological tools are currently used in postsecondary programs for students with intellectual and developmental disabilities?

Method

Participants and Procedures

This study employed a national survey design to document the current status of technology integration in postsecondary education programs for students with IDD. Following institutional review board approval, 326 programs were identified through Think College Directory (2024). Eligible participants were administrators such as directors, assistant directors, and coordinators responsible for overseeing program operations and technology use. Contact information was verified through official program websites. When multiple administrators were listed for a single program, the two highest-ranking individuals were selected. To improve contact accuracy, generic email addresses were replaced with direct contact information when available.

The survey was distributed electronically through Qualtrics over a 6-week period. Reminder messages were sent during the second, fourth, and final weeks to encourage participation. Prior to beginning the survey, participants completed an electronic consent form outlining the purpose of the study. The instrument included a combination of closed- and open-ended items, with an optional final prompt allowing for comments on technology use and accessibility. A total of 42 responses were obtained. In cases where more than one response was received from the same program, the response from the highest-ranking administrator was retained. The final sample consisted of 41 complete responses, representing 12.6% of all identified programs. The response rate may limit the generalizability of the findings. No missing data were present in the final dataset.

Survey and Analysis

A survey instrument was developed due to the absence of an existing instrument that addressed the research questions and examined patterns of technology use alongside institutional factors related to implementation. Survey items addressed six dimensions of technology integration; however, the present analyses focus on two core dimensions: prevalence of technology and types of technology. These dimensions provide foundational insight into the role of technology within programs. Prevalence of technology refers to how technology is used for instructional and administrative purposes.

This dimension reflects institutional goals and practices that may influence technology adoption (Fernández-Batanero et al., 2022). Types of technology identifies the range of tools in use, including hardware, software, and digital platforms. The instrument comprised 36 mixed item types, comprising Likert-scale items, multiple-choice, multiple-response, ranking, dichotomous (yes/no), and open-ended formats. Items were informed by the Technological Pedagogical Content Knowledge (TPACK) framework and existing literature on technology-related barriers in education (Ertmer, 1999; Mishra & Koehler, 2006). To support content validity, three university faculty members with expertise in learning technologies, special education, and survey design reviewed the instrument. Revisions based on expert feedback improved clarity, alignment, and item structure (Fowler, 2009).

The final survey demonstrated strong internal consistency (Cronbach's $\alpha = 0.82$), indicating acceptable reliability (DeVellis, 2016). Construct validity was established using Exploratory Graph Analysis (EGA) in R to examine the dimensional structure of the instrument, applying the GLASSO model with the Walktrap algorithm across 35 nodes representative of all items that required a response (Golino & Christensen, 2024; Isvoranu et al., 2022). Analytic parameters followed current standards in network psychometrics, with a fixed random seed (1) to support reproducibility (Isvoranu et al., 2022). This analysis identified six initial dimensions based on partial correlations among items. To assess dimensional stability, bootEGA was conducted using 100, 300, and 500 resamples. Stability values ranged from 1.28 to 1.18, confirming consistent replication of the six core dimensions. These findings further support the two core dimensions analyzed in the present study. Overall, the instrument offers a validated framework for assessing technology integration in postsecondary education programs for students with IDD.

Quantitative data were analyzed using descriptive statistics to examine the prevalence and types of technology used across postsecondary education programs for students with IDD. Frequencies were calculated to summarize institutional responses related to tool adoption and usage patterns. Bivariate analyses, including Pearson and Spearman correlations, were conducted to explore associations between program characteristics and technology use. Statistical analyses were performed using SPSS (Field, 2024). Qualitative responses were analyzed using thematic analysis (Braun & Clarke, 2022). Responses were reviewed through an iterative process of coding and categorization to identify recurring patterns and contextual insights. This approach supported the triangulation of quantitative findings with administrator perspectives, contributing an understanding of how technology is perceived and applied within program settings.

Results

Participants and Procedures

Descriptive statistics for program characteristics are presented in Table 1. Programs have been in operation for 0 to 20 years ($M = 7.50$, $SD = 6.08$). Approximately 41.5% of programs were in operation for fewer than 5 years, 24.4% for 5 to 12 years, and 31.7% for more than 12 years. Program completion times ranged from 9 to 60

months ($M = 31.21$, $SD = 12.37$). Programs also required an average of 5.45 enrollment periods, defined as fall, winter, and spring quarters, for program completion ($SD = 2.11$). Programs with multiple completion pathways or timelines and those without defined completion requirements or timelines were excluded from these summary statistics. Naturally, enrollment varied across programs. In spring 2024, programs enrolled an average of 21.79 students ($SD = 21.66$) with fall 2024 enrollment projected at 24.76 students ($SD = 22.42$). Pearson correlation analysis indicated a moderate positive relationship between program age and student enrollment in spring 2024 ($r = .584$, $p < .001$) and fall 2024 ($r = .489$, $p < .001$), suggesting that older programs reported higher enrollment. Enrollment figures were strongly correlated between spring and fall semesters ($r = .970$, $p < .001$).

Table 1*Program Characteristics*

Category	<i>N</i>	Min	Max	<i>M</i>	<i>SD</i>
Spring 2024 Student Enrollment	39	3	115	21.79	21.66
Expected Fall 2024 Enrollment	41	1	115	24.76	22.42
Full-Time Instructors	33	0	21	2.48	3.73
Part-Time Instructors	33	0	50	4.36	8.83
Program Completion Time (Months)	33	9	60	31.21	12.37
Required Enrollment Periods for Program Completion	29	1	8	5.45	2.11
Average Program Age (Years)	41	0	20.0	7.53	6.08

Note. *N* indicates the number of programs for which the item was applicable.

Staffing levels also varied. Programs employed 0 to 21 full-time instructors ($M = 2.48$, $SD = 3.73$) and 0 to 50 part-time instructors ($M = 4.36$, $SD = 8.83$). Eight programs reported having neither full-time nor part-time staff. Among programs that existed for two or more semesters ($N = 39$), a moderate positive correlation was found between part-time instructor staffing and enrollment for both spring ($r = .529$, $p < .001$) and fall ($r = .500$, $p = .001$). In addition, a small positive correlation was found between full-time instructor staffing and enrollment for both spring ($r = .362$, $p = .024$) and fall ($r = .371$, $p = .020$). Credentialing practices also differed across programs. Nearly all programs (92.7%) awarded a certificate upon completion. In addition, 36.6% offered credentials, and 12.2% conferred degrees. Employment preparation was identified as the primary program outcome (61%), followed by academic development (12.2%) and social skills (4.9%). An additional 22% indicated “Other,” specifying combined outcomes that included career preparation, leadership development, and social skills development. Policies regarding disability disclosure varied across programs. Most programs (80.5%) required students to disclose their disability to receive accommodations, 14.6% did not, and 4.9% of administrators were uncertain. Nearly all programs (97.6%) served students with

cognitive disabilities, 78.6% served students with autism, 68.3% enrolled students with multiple disabilities, and 46.3% included students with physical disabilities.

General Technology Use

Programs reported integrating a range of general-use technologies to support instruction and administration (see Table 2). Frequency of use was measured on a five-point scale (1 = *never*, 5 = *always*). Learning management systems (LMS) were nearly universal (97.6%), including Blackboard and Canvas. Office productivity suites and communication tools were also commonly adopted (92.7% each). Office productivity suites (92.7%) and communication tools (92.7%) were also frequently used, reinforcing their role in facilitating document creation and collaboration. Video conferencing platforms, including Zoom and Microsoft Teams, were reported by 80.5% of programs. Less frequently used technologies included virtual learning environments (58.5%) and library systems (53.7%). Note-taking tools were available in 48.8% of programs. Generative AI tools (46.3%) and AI-powered writing assistants (31.7%) were reported in fewer programs, suggesting emerging adoption rather than high integration. E-book platforms, online research databases, and programming tools were reported by fewer than 25% of programs.

Table 2

General Technology Tools Used by Students in the Program

General Technology Tool	Frequency (<i>n</i>)	Percentage (%)
Learning Management Systems (e.g., Blackboard, Canvas, Moodle)	40	97.6
Office Productivity Suites (e.g., Microsoft Office 365, Google Workspace)	38	92.7
Communication Tools (e.g., Email, Instant Messaging, Slack)	38	92.7
Digital Presentation Tools (e.g., Prezi, Google Slides, PowerPoint)	36	87.8
Collaboration Tools (e.g., Google Drive, OneDrive, Dropbox)	35	85.4
Video Conferencing (e.g., Zoom, Microsoft Teams, Google Meet)	33	80.5
Cloud Storage Solutions (e.g., Google Drive, Dropbox, OneDrive)	29	70.7
Virtual Learning Environments (e.g., Kahoot!, Quizlet, Coursera)	24	58.5
Library Systems (e.g., Online Public Access Catalog, Digital Libraries)	22	53.7
Note-Taking Tools (e.g., OneNote, Evernote, Google Keep)	20	48.8

General Technology Tool	Frequency (<i>n</i>)	Percentage (%)
Generative AI Tools (e.g., ChatGPT, DALL-E, GPT-4)	19	46.3
AI-Powered Writing Assistants (e.g., Grammarly, QuillBot)	13	31.7
E-Book Platforms (e.g., Kindle, VitalSource, Project Gutenberg)	9	22.0
Online Research Databases (e.g., JSTOR, PubMed, ProQuest)	8	19.5
Programming and Development Tools (e.g., GitHub, Jupyter Notebooks, Visual Studio Code)	1	2.4
AI-Based Research Tools (e.g., ResearchRabbit, Semantic Scholar)	1	2.4
Project Management Tools (e.g., Trello, Asana, Monday.com)	0	0.0

Note. Options are ordered by frequency. Percentages are based on a total of 41 respondents

Digital textbooks had the highest reported integration ($M = 3.39$, $SD = 1.05$), followed by online tutorials ($M = 3.34$, $SD = 0.88$). Interactive simulations ($M = 3.15$, $SD = 0.94$) and video lectures ($M = 3.10$, $SD = 1.04$) were also integrated into instruction. Administrator familiarity with technologies was measured on a 6-point scale, with the highest reported familiarity for collaboration tools ($M = 5.51$, $SD = 0.90$) and LMS ($M = 4.37$, $SD = 1.62$). Multimedia production tools showed moderate familiarity ($M = 3.39$, $SD = 1.46$), while authoring tools had the lowest familiarity ($M = 2.29$, $SD = 1.44$).

Assistive Technology Use

Patterns of assistive technology adoption and the specific tools reported are presented in Table 3. Tools supporting time management and scheduling were most prevalent (85.4%), followed by text-to-speech and speech-to-text software (70.7%), e-book readers and digital libraries (56.1%), and screen readers (53.7%). Less common tools included note-taking software and LMS with embedded accessibility features (46.3%). Visual aids were available in 26.8% of programs, hearing assistance technologies in 24.4%, and generative AI tools with accessibility features in 36.6%. Highly specialized tools, including math support software, alternative input devices, and mind-mapping applications, were reported in fewer than 15% of programs.

Table 3*Assistive Technologies Available to Students in the Program*

Assistive Technology	Frequency (<i>n</i>)	Percentage (%)
Time Management and Scheduling Tools	35	85.4
Text-to-Speech Software	29	70.7
Speech-to-Text Software	29	70.7
E-Book Readers and Digital Libraries	23	56.1
Screen Readers	22	53.7
Note-Taking Software	19	46.3
Learning Management Systems with Accessibility Features	19	46.3
Visual Aids	11	26.8
Hearing Assistance Technologies	10	24.4
Generative AI Tools with Accessibility Features	15	36.6
Math Support Tools	6	14.6
AI-Powered Accessibility Tools	5	12.2
Alternative Input Devices	4	9.8
Mind Mapping and Organizational Tools	4	9.8

Note. Options are ordered by frequency. Percentages are based on a total of 41 respondents.

The provision of assistive technology varied across programs. The most common approach was student-requested technology (56.1%), followed by universal access without a request (51.2%). Approximately 29.3% provided assistive technologies based on pre-arranged accommodations, and 12.2% reported other methods of provision. Device access influenced assistive technology availability. Most programs (97.6%) required students to bring their own devices, while 39% provided institutional devices, often through library resources. Among institutionally provided devices, iPads were the most common (17.1%), followed by Dell laptops (12.2%) and Chromebooks (4.9%). No programs reported providing MacBooks or Microsoft Surface tablets.

Open-ended responses highlighted how technology was used to promote student independence and meet accessibility needs. Administrators reported using iPads, Google productivity tools, and text-to-speech applications to support academic tasks and daily activities. Technology was frequently used for organization and self-regulation, including digital timers, reminders, and structured note-taking tools such as Project Relate, Glean,

and Texthelp Read & Write. These examples align with the survey results reflecting the availability of text-to-speech and note-taking tools. These qualitative responses align with the quantitative findings, indicating that programs implement technology to address diverse accessibility needs and support student autonomy.

Discussion

Little is known about the current use of technology in postsecondary programs for students with IDD. This study sought to fill the gap by examining how technology has been integrated into these intentionally designed programs. The findings provide insight into how programs adopt general and assistive technologies, how accessibility is implemented, and the extent of administrator familiarity with instructional technologies. By combining descriptive and correlational data with qualitative insights, the results add to existing research on digital inclusion and institutional practices in higher education for students with IDD. The results presented reflect responses to survey items addressing program demographics, accessibility, and technology integration.

Technology Integration and Institutional Patterns

The results indicate that general technology tools are well established in postsecondary programs, with nearly all reporting the use of LMS, office productivity suites, and communication platforms. This pattern aligns with prior research identifying these tools as central to course organization, content delivery, and collaboration in higher education (Dahlstrom et al., 2014; Ghilay, 2019). These results seem to suggest that students enrolled in postsecondary IDD programs engage with technologies comparable to those used by the general student population. However, emerging technologies, including generative AI and AI-powered writing assistants, were reported in fewer than half of programs. This suggests that these tools are still in the early stages of adoption. Similar trends have been observed in higher education, where institutions typically establish core digital infrastructure before expanding into more specialized or innovative applications (Fernández et al., 2023; Gkrimpizi et al., 2023).

Enrollment and staffing characteristics were also associated with technology use. Older programs generally reported higher student enrollment, and enrollment was moderately correlated with part-time instructor staffing, with a stronger association than full-time staffing, across both spring and fall terms. This pattern suggests that program growth may be supported by flexible staffing models, which could influence the capacity to implement and maintain technology resources. Notably, some programs reported having neither full-time nor part-time instructors, which may indicate reliance on external instructional arrangements or highlight gaps in program structure that could affect technology integration and instructional support. While the literature on IDD-focused postsecondary education programs has not extensively examined these relationships, these findings suggest that institutional structure and maturity may shape technology integration practices.

Accessibility and Assistive Technology Use

The study highlights variability in the use of assistive technologies. Foundational tools, including text-to-speech, speech-to-text, and time management applications, were reported in most programs. This aligns with research emphasizing the importance of these tools for supporting organization, academic engagement, and independent learning among students with disabilities (Floyd et al., 2024; McNicholl et al., 2021; Perelmutter et al., 2017). In contrast, highly specialized tools, such as math support software, alternative input devices, and advanced visual or hearing aids, were reported infrequently. This limited availability suggests that while programs are addressing basic accessibility needs, they may not be fully equipped to support the diverse range of accommodations that students with IDD require.

Provision models often relied on students requesting access to specific technologies, reflecting a reactive approach rather than one based on universal access principles. This finding is consistent with prior work indicating that higher education institutions frequently depend on individualized accommodations rather than proactive, embedded accessibility (Burgstahler, 2021; CAST, 2024; McNicholl et al., 2021). Device policies also influenced access. Most programs required students to bring their own devices, with fewer than half offering institutional devices. These practices may contribute to inequities, particularly for students with limited financial resources or lower digital literacy. This reflects ongoing concerns in the literature regarding the digital divide and its impact on participation in technology-mediated learning (Organisation for Economic Co operation and Development, 2023; Reddy et al., 2020).

Administrator Knowledge and Institutional Readiness

Administrator familiarity with technology varied across tool types. High familiarity with collaboration platforms and LMS reflects alignment with core program operations. In contrast, lower familiarity with authoring and multimedia production tools suggests limited capacity for developing custom digital resources or integrating advanced instructional applications. These findings align with research demonstrating that administrator and faculty knowledge is central to effective technology integration (Ertmer & Ottenbreit-Leftwich, 2010; Lidolf & Pasco, 2020; Olaniyan & Uzorka, 2024). The combination of foundational technology use and lower engagement with advanced or specialized tools points to a pattern of partial readiness. Programs are equipped to meet basic instructional and accessibility needs; however, systemic gaps may limit innovation and full alignment with universal design practices. The qualitative responses reinforce this interpretation, with administrators describing technology primarily as a support for daily tasks, organization, and basic accessibility, rather than as a tool for transformative learning experiences.

Implications

The findings of this study have several implications for postsecondary education programs for students with IDD. Although foundational technologies are in place, the accessibility of tools and the technology experiences provided to students remain

inconsistent. Programs that rely primarily on LMS, productivity suites, and communication platforms provide basic digital access but may not fully prepare students for independent learning or the technology demands of contemporary workplaces. For example, with advances in artificial intelligence and the continuous development of digital tools, students' digital literacy may not meet the demands of academic performance and employability (Khan et al., 2022; Ramos et al., 2025). Limited adoption of specialized and assistive tools reduces opportunities for students to develop digital literacy, self-management skills, and confidence in using accessibility features. Programs without dedicated instructional staff may also experience challenges in supporting students' engagement with technology, underscoring the need for staffing models that provide both instructional coverage and capacity for technology integration. As a result, some students may complete postsecondary education programs without the range of technology experiences necessary to support long-term academic, employment, and community outcomes.

Improving student technology experience requires strengthening both institutional infrastructure and staff training while ensuring alignment with accessibility standards. Administrator and instructor familiarity with advanced instructional and assistive tools is essential for integrating these technologies into everyday practice. Providing professional development opportunities and embedding technology use across courses and support services can help programs move from reactive, student-initiated accommodations to proactive, universally accessible instruction. Aligning practices with the Web Content Accessibility Guidelines (WCAG 2.1) and the principles of Universal Design for Learning (UDL) can increase digital inclusion, reduce reliance on individual requests, and ensure that all students consistently encounter accessible environments (CAST, 2024; Edyburn, 2021; World Wide Web Consortium, 2025). Equitable access also depends on planning for both device availability and intentional exposure to assistive technologies. Programs may increase technology-supported learning by expanding access to institutionally provided devices, ensuring consistent integration of core accessibility tools in instruction, and providing structured opportunities for students to engage with advanced tools. These strategies may further support students' preparation for the digital demands of higher education, employment, and community participation.

Limitations

Several limitations should be considered when interpreting the findings of this study. The low response rate may limit the generalizability of the findings, with 41 completed surveys representing 12.6% of the 326 programs identified in the Think College Directory. Responses were limited to program administrators, which constrains the perspective of the study. Administrator reports provide insight into technology availability and institutional practices but do not capture how often students with IDD use these tools or the contexts in which they are engaged. Input from instructors, support staff, and students were not included, which limits the understanding of technology experiences from a user perspective. The voluntary nature of participation may also introduce response bias, as non-responding programs could differ in technology practices or resources.

Furthermore, the study relied on data collected at a single point in time, which does not account for potential changes in enrollment, staffing, or technology integration over time. As a result, the findings may not reflect ongoing developments or temporal variations in how programs adopt and implement technology. Finally, the exploratory nature of this research and the limited existing literature on technology use in programs for students with IDD may result in some influencing factors remaining unexamined (Stebbins, 2001). Unaddressed variables, including institutional policies, budget constraints, or informal support mechanisms, could affect technology adoption and the interpretation of results. These limitations highlight the need for longitudinal research and expanded data collection to provide a more comprehensive understanding of technology integration in postsecondary education programs for students with IDD.

Future Research

Future research should address several areas to build on the findings of this study. A longitudinal approach would provide insight into how technology integration evolves in postsecondary education programs for students with IDD. Tracking changes in technology adoption, program demographics, and instructional practices over multiple years could illuminate trends and inform strategies for sustainable program development. Including perspectives from students, instructors, and support staff in future investigations would also provide an understanding of how technology supports or challenges the learning experience. Student perspectives could highlight disparities in access, engagement, or self-directed technology use that are not fully captured through administrator reporting.

Further research is also needed to examine the barriers that affect technology adoption and implementation. The current study focused on program characteristics and reported practices, without directly investigating institutional or instructional obstacles to integration. Exploring first-order (external) and second-order (internal) barriers through the lens of the TPACK framework could clarify how policies, staffing models, and institutional resources shape technology use (Ertmer, 1999; Mishra & Koehler, 2006; Zhao & Cziko, 2001). Understanding these barriers could guide the development of targeted interventions to strengthen infrastructure, enhance professional development, and promote consistent accessibility practices.

Finally, future studies should evaluate the effectiveness of emerging technologies in advancing academic, social, and employment outcomes for students with IDD. While this study documented the availability and use of general and assistive tools, the impact of these technologies on student performance and independence remains underexplored. Examining how program characteristics, staffing patterns, and device access influence technology effectiveness could inform resource allocation and instructional design. Together, these avenues for future research can contribute to the development of evidence-based strategies that support digital inclusion and foster meaningful learning experiences for students with IDD.

Conclusion

This study examined the current status of technology in postsecondary education programs for students with IDD, highlighting patterns of tool adoption, accessibility practices, and institutional characteristics. Program characteristics, including age, enrollment, and staffing models, demonstrated substantial variation. Part-time instructor staffing was more strongly associated with enrollment than full-time staffing, suggesting that programs may rely on flexible staffing models to support growth and meet instructional demands. The findings also indicate that foundational technologies, including LMS and productivity software, are consistently used to support instructional delivery and program operations, while assistive technologies and emerging tools remain less readily available. These patterns suggest constraints in accessibility that may affect readiness for academic and employment demands in technology-mediated environments. Addressing gaps in access and use through professional development, expanded device availability, and alignment with accessibility standards could strengthen the role of technology in promoting inclusion and independence. Collectively, these results highlight the need for coordinated, ongoing efforts to ensure that postsecondary education programs for students with IDD are equipped to support success in both higher education and the workforce.

Declarations

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