

Il ruolo delle tecnologie emergenti negli interventi di orientamento per studenti con disabilità: una revisione sistematica¹

The Role of Emerging Technologies in Guidance Interventions for Students with Disabilities: a Systematic Review

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RIASSUNTO: La revisione sistematica analizza 23 studi sulle tecnologie emergenti negli interventi di orientamento per studenti con disabilità, in particolare per l'occupabilità e la transizione scuola-lavoro. Piattaforme basate su IA, video modeling e realtà virtuale/aumentata mostrano effetti positivi su autoefficacia, competenze e coinvolgimento, evidenziando il potenziale inclusivo e la necessità di ulteriori studi longitudinali.

PAROLE-CHIAVE: Tecnologie emergenti; Disabilità; Occupabilità; Revisione sistematica.

ABSTRACT: This systematic review of 23 studies explores emerging technologies in guidance for students with disabilities, focusing on employability and school-to-work transitions. AI-based platforms, video modeling, and virtual/augmented reality foster self-efficacy, skills, and engagement.

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Context adaptation and ongoing support are key, highlighting inclusive potential and the need for further longitudinal research.

KEY-WORDS: Technologies; Disabilities; Employability; Systematic Review.

Introduction

Inclusive education requires the implementation of teaching strategies that recognize and value the diversity of all learners. Emerging technologies offer significant opportunities to enhance employability skills and support the school-to-work transition for students with disabilities. Tools such as assistive technologies, artificial intelligence-based digital platforms, and virtual reality simulations provide innovative approaches to increasing student engagement, fostering skill development, and strengthening self-efficacy.

Integrating these technologies into educational settings can contribute to the creation of more inclusive and accessible learning environments, promoting equity and equipping all students with the resources necessary to navigate workforce challenges. The adoption of inclusive educational strategies, particularly those guided by the Universal Design for Learning (UDL) framework, enables the development of flexible and adaptable interventions that address individual needs and maximize each student's potential.

2. Methods

The systematic review followed an extensive and structured process (Petticrew & Roberts, 2006), encompassing multiple phases: defining the phenomenon under investigation, selecting relevant studies (Noblit & Hare, 1988), critically appraising them, and extracting data (Ghirotto, 2020). Adopting an aggregative synthesis approach, the primary aim of this review was to systematically organize and synthesize existing evidence rather than to develop new theoretical constructs. By categorizing findings into key thematic areas, this review provides a structured overview of how emerging technologies support career guidance and

school-to-work transitions for students with disabilities (Sandelowski & Barroso, 2007).

The initial phase involved formulating the review question, which needed to clearly define a phenomenon suitable for qualitative inquiry and account for the use of sensitizing concepts (Noblit & Hare, 1988; Hammersley, 2002). Subsequently, the review protocol was registered on PROSPERO, an international platform dedicated to systematic reviews in healthcare and social care.

To ensure maximum transparency throughout the review process and to systematically document the evaluation of the included primary studies (data extraction), the PRISMA statement was employed (Moher et al., 2009). The Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA), originally designed for quantitative systematic reviews and meta-analyses of randomized controlled trials (RCTs), also provides a valuable framework for reporting systematic reviews of qualitative studies. By adopting this checklist, the review maintained a comprehensive and rigorous presentation of findings, with transparent documentation of each stage in the review process.

2.1. *Review question*

This systematic review is guided by the following research question: *What is the evidence on guidance interventions with emerging technologies for employability and school-to-work transition in students with disabilities?*

To define the scope of the review and facilitate the development of search terms, the PICO framework was employed (Methley et al., 2014). Specifically:

- *Population (P)*: Students with disabilities (children, adolescents, and young adults)
- *Intervention (I)*: Guidance interventions incorporating emerging technologies (e.g., assistive technologies, AI-based tools)
- *Comparator (C)*: No intervention, standard programs, or approaches not focused on employability
- *Outcomes (O)*: Enhanced employability skills and improved school-to-work transitions

2.2. Review strategy

A comprehensive literature search was systematically conducted across multiple electronic databases to ensure extensive coverage of existing research and to capture studies from diverse disciplinary perspectives. The following databases were selected for their relevance and breadth:

- *ProQuest*: A multidisciplinary platform offering access to dissertations, theses, scholarly journals, and various academic resources.
- *Education Source (via EBSCOhost)*: A specialized database encompassing research and practice in the field of education.
- *ERIC (Education Resources Information Center)*: A widely recognized database dedicated to education-related literature, sponsored by the Institute of Education Sciences (IES) of the U.S. Department of Education.
- *Web of Science*: A leading citation database that spans multiple disciplines, including education, social sciences, and health-related research.
- *Wiley Online Library*: A publisher-specific platform providing peer-reviewed journals and academic books across various fields of study.

The search strategy employed a combination of keywords related to disabilities, guidance interventions, employability, and emerging technologies, utilizing Boolean operators (AND, OR) to refine the search. The core search query was tailored as needed to align with the indexing criteria and search functionalities of each database.

Population (P)

(“students with *disab**” OR “student* with *disab**” OR “disabled student*” OR “special education student*” OR “students with special needs” OR ASD OR “autism spectrum disorder” OR “intellectual *disab**” OR “learning *disab**” OR “developmental *disab**”)

Interventions (I)

(“career guidance” OR “career counseling” OR “career education” OR “transition planning” OR “school to work” OR “school-to-work” OR “work based learning” OR “work-based learning” OR “vocational education” OR “job coaching”)

Outcomes (O)

(“employab*” OR “job readiness” OR “work readiness” OR “vocational skill*” OR “career readiness” OR “workplace skill*”)

Technologies (T)

(“emerging technolog*” OR “assistive technolog*” OR “artificial intelligence” OR AI OR “virtual reality” OR VR OR “augmented reality” OR AR OR “video modeling” OR “video modelling” OR “mobile prompting” OR wearabl* OR robot* OR “3D print*”)

This multi-database search was designed to identify empirical studies (qualitative, quantitative, or mixed-methods) investigating guidance interventions that integrate emerging technologies to improve employability skills and support the school-to-work transition for students with disabilities. The retrieved citations were subsequently evaluated based on the inclusion and exclusion criteria outlined in the review protocol.

2.3. Inclusion and Exclusion criteria

Establishing explicit inclusion and exclusion criteria is critical for ensuring methodological rigor and consistency throughout the systematic review process (Noblit & Hare, 1988; Petticrew & Roberts, 2006). Table 1 provides a detailed overview of the inclusion and exclusion criteria adopted in this systematic review.

Table 1. Inclusion and Exclusion criteria.

Criteria	Inclusion	Exclusion
Population	School-aged children, adolescents, and young adults with disabilities.	Research focused exclusively on adult populations in higher education or professional training.

Criteria	Inclusion	Exclusion
Intervention	Guidance interventions incorporating emerging technologies (e.g., assistive technologies, AI-based tools).	Studies that do not involve emerging or assistive technologies in guidance interventions.
Comparison	Studies comparing interventions to standard programs, no intervention, or non-technology-based approaches.	Studies without a relevant comparison group or lacking sufficient data for meaningful analysis.
Outcomes	Studies examining the impact of emerging technologies on employability skills, self-efficacy, vocational engagement, and transition success.	Studies that do not address employability, vocational outcomes, or transition success.
Study Design	Empirical studies, including quantitative, qualitative, mixed-methods, randomized controlled trials (RCTs), and quasi-experimental designs.	Theoretical articles, literature reviews, and conceptual papers without empirical data.
Publication Type	Peer-reviewed journal articles to ensure a validated evidence base.	Theses, dissertations, conference proceedings, book chapters, reports, and other forms of gray literature.
Language	English-language publications to facilitate consistency in analysis.	Non-English publications to ensure accessibility and consistency in data analysis.

Criteria	Inclusion	Exclusion
Context	Studies conducted within school settings (primary, secondary, and special education).	Studies conducted outside formal school settings, such as workplace interventions, higher education environments, or community-based training programs.

The application of these criteria allowed for a rigorous selection process, ensuring that only the most relevant and methodologically sound studies were included in the synthesis.

2.4. Protocol writing and registration

In alignment with best practices for conducting systematic reviews (Petticrew & Roberts, 2006) and adhering to specific guidelines for qualitative research syntheses (Noblit & Hare, 1988; Sandelowski & Barroso, 2007), the protocol for this review was developed prior to data collection and has been submitted to the PROSPERO international database (<https://www.crd.york.ac.uk/prospero/>). PROSPERO is a dedicated platform for the registration of systematic reviews in the health and social care fields, ensuring methodological transparency and minimizing the risk of duplication.

The protocol explicitly outlines the review objectives, inclusion and exclusion criteria, and the procedures for data extraction and synthesis, thereby serving as a comprehensive framework for the subsequent phases of the review process. This registration step further promotes peer scrutiny and enhances accountability, aligning with established standards for conducting rigorous systematic reviews (Moher *et al.*, 2009).

2.5. Communicating the review (PRISMA)

This review complies with the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) guidelines (Moher *et al.*, 2009), which offer a systematic framework to ensure clarity, transparency, and comprehensiveness in reporting. Although originally designed for quan-

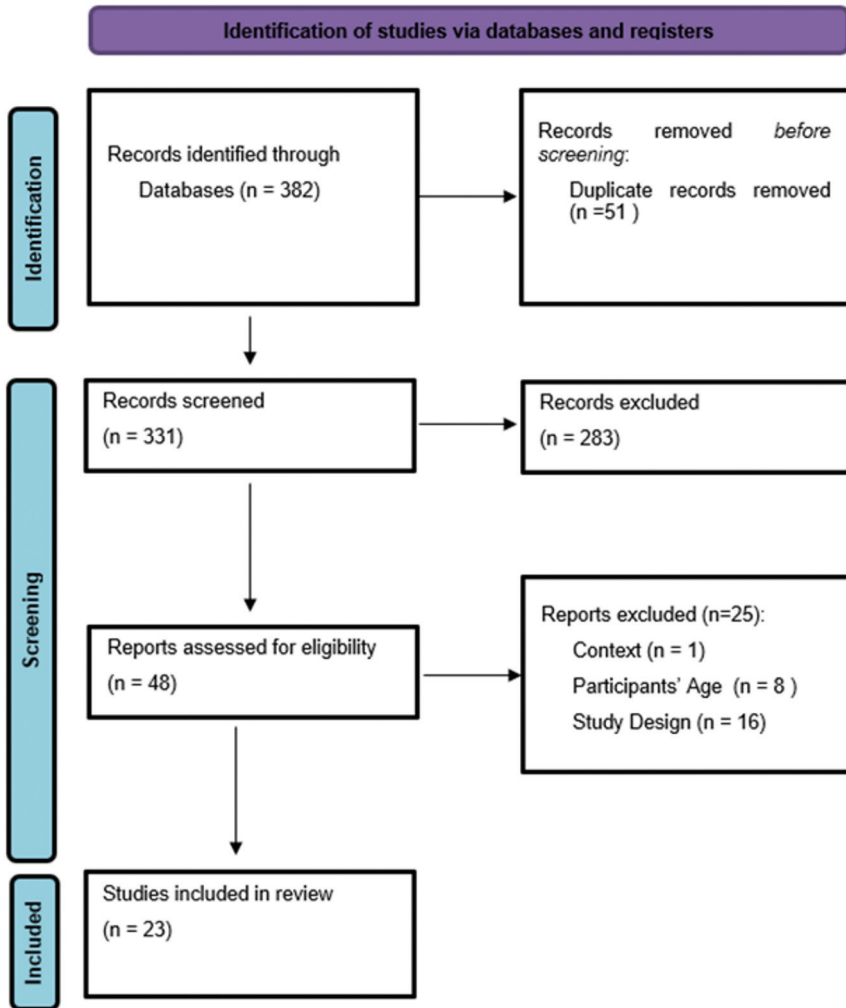


Figure 1. PRISMA 2020 flow diagram.

titative systematic reviews-particularly those involving randomized controlled trials-PRISMA also serves as a robust guideline for reviews encompassing qualitative and mixed-methods studies.

Adherence to PRISMA facilitates a standardized presentation of results, thereby improving the clarity of findings and supporting the effective translation of knowledge for researchers, practitioners, and other relevant stakeholders (Figure 1).

3. Results

To systematically organize the screening and selection of studies, *Rayyan*, an online platform specifically designed to streamline systematic reviews, was employed. This tool enabled the seamless importation of references from multiple databases into a single, collaborative workspace, where potential duplicates were automatically identified and removed. During the screening phase, each record was categorized as “*Include*,” “*Exclude*,” or “*Maybe*,” with relevant notes added to facilitate collaborative decision-making. Additionally, *Rayyan*’s advanced search and filtering functions supported the rapid identification of the most pertinent articles, enhancing both the transparency and efficiency of the review process.

The initial database searches yielded a total of 382 records across six databases:

- *ProQuest*: 67
- *Education Source (via EBSCOhost)*: 2
- *ERIC*: 25
- *Scopus*: 202
- *Web of Science*: 12
- *Wiley Online Library*: 74

Following the importation of these records into *Rayyan*, the platform detected and removed 51 duplicate entries, resulting in 331 unique references for the initial title and abstract screening. This process led to the selection of 48 articles for full-text review, during which each study was evaluated for its alignment with the predefined eligibility criteria and its capacity to provide sufficiently rich data for qualitative synthesis. Studies were excluded if they lacked peer review, did not focus on school-based contexts, or failed to present the necessary empirical evidence to address the review objectives.

The majority of the included studies focused on school-based settings and encompassed a diverse range of disabilities-including cognitive, sensory, and physical impairments-across various age groups (children, adolescents, and young adults). The interventions examined involved a variety of emerging technologies, such as AI-driven career guidance platforms,

assistive devices, and immersive tools like virtual and augmented reality. This wide array of technologies highlights their growing potential to enhance employability skills and facilitate the school-to-work transition for students with disabilities.

3.1. *Included studies*

A total of 48 full-text reports were assessed for eligibility; 25 were excluded—content type ($n = 16$; 64%), participant age ($n = 8$; 32%), or context ($n = 1$; 4%)—leaving 23 studies included in this review. Table 2 summarizes each study's focus and key findings.

Taken together, the evidence spans three families of technologies applied to career guidance and employability for students with disabilities: video-based instruction and mobile prompting, virtual/augmented reality, and AI-enabled or digital curricula.

Most studies used video modelling/video prompting and mobile devices to support the acquisition and maintenance of vocational routines and to increase independence (see Table 2). A second group investigated VR/AR to rehearse job interviews and social-emotional skills in safe environments, reporting gains in confidence and interpersonal behaviors. A smaller set evaluated AI-enhanced programmes and online curricula aimed at career exploration, self-efficacy and 21st-century skills.

Patterns also differed by developmental stage: interventions below age 14 commonly targeted foundational social/functional competencies, whereas studies with older adolescents and young adults emphasized job readiness and autonomous task performance. Across technologies and ages, three recurring benefits emerged: (i) improved employability and job-related skills, (ii) enhanced social-emotional functioning, and (iii) greater independence via self-prompting and reduced external support (details in Table 2).

Table 2. Included studies: focus and key findings.

No.	Citation	Study Focus & Key Findings
1.	<i>Burke et al. (2013a)</i>	<p><i>Focus:</i> Tablet-based video modeling (VideoTote software) for young adults with ASD in a shipping task.</p> <p><i>Key Findings:</i> Up to 100% task accuracy, decreased verbal prompts, skill maintenance up to 8 weeks.</p>
2.	<i>Burke et al. (2010)</i>	<p><i>Focus:</i> BST vs. Performance Cue System (PCS) via iPhone to teach social-vocational skills to young adults with ASD.</p> <p><i>Key Findings:</i> Faster skill acquisition with PCS; BST contributed to maintenance but was less efficient.</p>
3.	<i>Chu & Zhang (2015)</i>	<p><i>Focus:</i> Teaching job-related social skills in Taiwanese vocational schools for students with intellectual disabilities.</p> <p><i>Key Findings:</i> Priority on basic skills (e.g., hygiene, punctuality); teaching frequency linked to teacher qualifications.</p>
4.	<i>Izzo et al. (2015)</i>	<p><i>Focus:</i> EnvisionIT (EIT) curriculum for 21st-century skill development in high school transition programs.</p> <p><i>Key Findings:</i> Improved ICT literacy, career knowledge, and comprehensive Transition Portfolios.</p>
5.	<i>Hatfield et al. (2017)</i>	<p><i>Focus:</i> BOOST-A™ online transition program for adolescents with ASD, targeting career readiness and self-determination.</p> <p><i>Key Findings:</i> Enhanced career exploration and self-determination in home settings, with no significant changes in overall career planning.</p>

No.	Citation	Study Focus & Key Findings
6.	<i>Lombardi et al. (2017)</i>	<p><i>Focus:</i> EnvisionIT (EIT) curriculum for IT literacy and college/ career readiness among students with disabilities.</p> <p><i>Key Findings:</i> Substantial gains in IT navigation, career planning, and alignment with 21st-century standards.</p>
7.	<i>Van Laarhoven et al. (2018)</i>	<p><i>Focus:</i> Mobile technologies with universally designed prompting systems for high school students with ASD/ID.</p> <p><i>Key Findings:</i> Improved independent task completion, self-fading of prompts, and stronger problem-solving skills.</p>
8.	<i>Boles et al. (2019)</i>	<p><i>Focus:</i> Single-case meta-analysis of 39 studies on employment skill interventions for individuals with developmental disabilities.</p> <p><i>Key Findings:</i> Moderate to strong gains in employment skill acquisition and independence in task performance.</p>
9.	<i>Burgin et al. (2020)</i>	<p><i>Focus:</i> Cost analysis of video-based instruction (VBI) vs. Extended School Year (ESY) for maintaining vocational skills in ASD.</p> <p><i>Key Findings:</i> Comparable effectiveness with lower costs for VBI, offering more flexibility and independence.</p>
10.	<i>Kang & Chang (2020)</i>	<p><i>Focus:</i> Augmented reality (AR) game for teaching ATM usage skills to junior high students with intellectual disabilities.</p> <p><i>Key Findings:</i> Improved independent cash withdrawal/ transfer; high satisfaction among teachers and parents.</p>

No.	Citation	Study Focus & Key Findings
11.	<i>Munandar et al. (2020)</i>	<p><i>Focus:</i> Systematic review of video-based interventions (VBIs) for integrated competitive employment in ASD.</p> <p><i>Key Findings:</i> Significant enhancements in job performance and job search skills, with solid generalization and maintenance.</p>
12.	<i>Bross et al. (2021)</i>	<p><i>Focus:</i> Meta-analysis of video modeling interventions for enhancing job performance and social interaction among adolescents and adults with ASD.</p> <p><i>Key Findings:</i> Marked improvements in employment readiness across 20 studies.</p>
13.	<i>Michalski et al. (2021)</i>	<p><i>Focus:</i> Virtual environment-based vocational training for individuals with neurodevelopmental disorders.</p> <p><i>Key Findings:</i> Effective VR-based job interview simulations, strong real-world transfer of learned skills.</p>
14.	<i>Morse et al. (2021)</i>	<p><i>Focus:</i> iPad-based video modeling to improve food preparation skills in young adults with developmental disabilities.</p> <p><i>Key Findings:</i> Better task accuracy, reduced coaching prompts, skill maintenance for up to eight weeks.</p>
15.	<i>Muharib et al. (2022)</i>	<p><i>Focus:</i> Handheld technology (e.g., smartphones, tablets) with video prompting, task cueing for vocational skills in individuals with IDD.</p> <p><i>Key Findings:</i> Significant gains in task performance, high generalization, improved skill retention.</p>

No.	Citation	Study Focus & Key Findings
16.	<i>Roldán-Álvarez et al. (2021)</i>	<i>Focus:</i> iPads and ClipIt platform for collaborative video-based learning to teach job skills to students with intellectual disabilities. <i>Key Findings:</i> Enhanced job-related skills, peer collaboration, and task comprehension.
17.	<i>Bravou, Oikonomidou, & Drigas (2022)</i>	<i>Focus:</i> Review of virtual reality (VR) interventions for children and adolescents with ASD. <i>Key Findings:</i> Improvements in emotional and social skills, with strong potential for real-world application.
18.	<i>Chen & Yakubova (2023)</i>	<i>Focus:</i> Video-based interventions (VBI) for teaching vocational skills to transition-age youth with ASD. <i>Key Findings:</i> 86% skill retention, 73% generalization, and enhanced workplace readiness across 22 studies.
19.	<i>Clouder et al. (2023)</i>	<i>Focus:</i> Scoping review of 22 studies on environmental interventions for autistic youth (15–29 years) transitioning to employment. <i>Key Findings:</i> VR-JIT and JobTIPS reduced interview anxiety, boosted self-confidence, and supported employability.
20.	<i>Saad et al. (2023)</i>	<i>Focus:</i> Employability factors for hearing-impaired special education students in Malaysian polytechnics. <i>Key Findings:</i> Emphasis on digital facilities, positive attitudes toward IR4.0 technologies, and improved readiness for industry demands.
21.	<i>Sung et al. (2023)</i>	<i>Focus:</i> Lived experiences of autistic young adults (18–25 years) in the EPASS program (video modeling, simulations, role-playing). <i>Key Findings:</i> Enhanced self-confidence, communication, and interview preparation.

No.	Citation	Study Focus & Key Findings
22.	<i>Hong & Kim (2024)</i>	<i>Focus:</i> AI-enhanced career training programs for students with intellectual disabilities. <i>Key Findings:</i> Improved career self-efficacy, learning flow, and adaptability in workplace settings.
23.	<i>Moon (2024)</i>	<i>Focus:</i> Verbal prompts in VR-based social skills training for autistic children (12–13 years). <i>Key Findings:</i> Greater confidence in initiating conversations, better attention to social cues, but challenges with text comprehension and technical navigation.

4. Discussion

This systematic review has highlighted the crucial role of emerging technologies in supporting career guidance and the school-to-work transition for students with disabilities. Analyzing the studies based on the type of technology used, the target population, and the observed benefits, significant considerations emerge that can guide future interventions and policy decisions in inclusive education.

Findings indicate that emerging technologies hold significant potential to address persistent gaps in career guidance pathways for students with disabilities. However, their effectiveness depends on key factors such as accessibility, customization of interventions, and integration with inclusive teaching methodologies. Video modeling and mobile prompting technologies have proven to be effective tools in fostering autonomy in performing professional tasks. Their use suggests that learning based on observation and repetition is a highly valuable strategy for this student population. At the same time, immersive virtual environments have demonstrated a capacity to enhance social competencies and mitigate work-related anxiety.

These solutions, if integrated into structured pathways, can expand experiential learning opportunities for students. Artificial intelligence emerges as a promising tool for personalized career guidance, offering recommendations and pathways based on students' individual characte-

ristics. Nevertheless, its adoption necessitates a critical examination of equity and accessibility concerns, particularly to mitigate risks of algorithmic bias and to promote user-centered design tailored to individuals with disabilities.

The analyzed studies clearly show that students' needs vary significantly depending on age group and disability profile. For children and adolescents under 14, technologies are particularly useful in strengthening social and foundational skills, providing playful and immersive learning experiences that facilitate interaction with the environment. For older students, however, it is essential that technologies be integrated into concrete vocational training pathways aimed at acquiring skills that are immediately applicable in the job market. This distinction is crucial to avoid generic approaches and to develop targeted strategies. The use of virtual reality, for example, can be a valuable tool for enhancing social skills in younger students, while video modeling and AI-driven career guidance are more effective for students nearing entry into the labor market.

Three critical dimensions emerge from the evidence analyzed: while technologies contribute to the development of employability skills, their effectiveness depends on being embedded within structured pedagogical frameworks. Simply introducing digital tools is not enough; structured learning pathways must be designed to maximize their educational potential. Enhancing social and emotional skills is a key opportunity, especially through immersive virtual environments. However, the risk of isolation or excessive dependence on technology must be carefully considered, ensuring a balance between digital experiences and real-world interactions.

Independence in performing work tasks requires a personalized approach, with technological solutions adaptable to each student's specific needs.

The combined use of different tools can be a winning strategy, for example, integrating AI for career guidance, VR for workplace simulations, and video modeling for skill reinforcement.

4.1. Implications for practice, equity and ethics

For schools and transition programs, embed video modeling/prompting within clear task analyses and prompt-fading plans, use VR/AR as a rehearsal space followed by in-situ practice to support generalization, and adopt AI-enabled guidance with educator oversight. Implementation

should include teacher professional development, fidelity/dosage monitoring, and routine tracking of job-readiness, social–emotional skills, and independence. Equitable adoption requires accessible design (captioning, alternative I/O, AAC compatibility), reliable and affordable infrastructure, and transparent data practices. For AI tools, plan bias auditing, explainability, and contestability mechanisms. Partnerships with families and employers are essential for scale and sustainability.

4.2. Gaps in the literature, strengths, and limitations

Despite the progress observed, several critical challenges remain that warrant further investigation in future research. One of the main concerns relates to long-term sustainability, as most studies focus on short-term interventions without evaluating the retention of acquired skills over time.

Economic and infrastructural barriers also persist, as not all schools have the necessary resources to implement advanced technological solutions—highlighting the need for scalable and sustainable interventions.

Another key issue concerns the integration of these tools into school curricula. To generate lasting impact, they must be embedded within inclusive educational strategies and supported by adequate training for teachers and tutors. Without structured implementation, their potential risks remain unfulfilled.

Significant gaps in the literature also remain, particularly the lack of longitudinal and large-scale studies validated across diverse educational and cultural contexts. Small sample sizes and limited research settings undermine the generalizability of findings, underscoring the urgency of developing flexible and cross-culturally robust models. Future research should prioritize long-term approaches, cross-context comparative analyses, and practical tools for the effective integration of technologies in teaching. These efforts must place inclusion at the center, ensuring that technology not only removes barriers but actively fosters the empowerment of students with disabilities.

At the same time, this review presents several strengths. The analysis of a broad range of digital tools—from virtual reality to AI-based programs—offers a comprehensive understanding of their contribution to the school-to-work transition. The inclusion of students with different types of certified disabilities, such as autism spectrum disorder, intellec-

tual disabilities, and sensory impairments, also allows for the evaluation of the effectiveness and adaptability of these solutions across a variety of educational settings and functional profiles.

However, some limitations must be acknowledged. Variations in research methods, sample sizes, and reported outcomes limit the generalizability of the findings. Moreover, the predominance of studies conducted in high-income countries reduces the applicability of the results to more diverse educational contexts. Finally, the lack of long-term follow-up studies prevents a full assessment of the sustained impact of the technological solutions examined.

From a practical perspective, this review provides relevant insights for schools and policymakers. The effective and sustainable use of inclusive technologies requires the adoption of the Universal Design for Learning (UDL) framework, multidisciplinary collaboration, ongoing professional development, and solid policy support. Only a systemic and integrated approach can fully realize the transformative potential of emerging technologies in promoting career guidance and employability for students with disabilities.

Beyond heterogeneity and short follow-ups, the evidence base is affected by small samples, inconsistent implementation-fidelity reporting, and the likely presence of publication/small-study effects. Outcome measures are non-standardized across studies, which limits comparability and meta-analytic synthesis.

We call for pragmatic and longitudinal studies with active, pedagogy-matched control conditions, transparent fidelity and dosage reporting, and cost-effectiveness analyses. Comparative work should test which technology families work best for which profiles and ages (and why), using common outcome sets and tracking transfer to competitive employment.

Co-design with students, families, and employers—and routine fairness/privacy evaluations for AI tools—should become standard.

Conclusion

This systematic review highlights the role of emerging technologies in strengthening career guidance and school-to-work transitions for students with disabilities. Empirical evidence confirms their effectiveness in promoting employability skills, social interaction, and autonomy, provided

that these tools are structurally integrated within inclusive pedagogical and policy frameworks.

Indeed, the mere introduction of technology is not sufficient: the success of such interventions depends on their long-term sustainability, accessibility, and responsiveness to diverse educational needs. Tools such as virtual reality, artificial intelligence, and video modeling show promising results, yet further empirical validation is required, as their effectiveness may vary across contexts and student populations.

Despite persisting challenges, the potential of emerging technologies to support inclusive career development is increasingly evident.

However, their real impact depends on evidence-based implementation, adequate teacher training, and coherent policy support. Future research should prioritize longitudinal studies and cross-cultural analyses to develop robust and transferable models that ensure equitable access and participation.

In conclusion, emerging technologies may represent a turning point in inclusive education by helping to reduce structural inequalities in transition pathways. Their successful adoption calls for a shared, multidisciplinary commitment and a continuous process of improvement, ensuring that all students with disabilities not only gain access to, but also meaningfully benefit from, the opportunities offered by digital innovation.

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