

REIMAGINING INCLUSIVE EDUCATION THROUGH DIGITAL PLATFORMS: A NARRATIVE REVIEW

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Abstract: *The present narrative review aims to provide an overview of the recent literature focusing on the potential benefits as well as challenges, and gaps in knowledge of using digital platforms in inclusive education, more specifically for special education classrooms. Inclusive education is a worldwide concern and the emergent digital age has expanded the relevance of digital platforms to assist diverse learners. Although these tools present new possibilities for access and differentiation, concerns exist regarding fair implementation, teacher preparedness and sustainability. A narrative review of the pertinent literature was performed using Scopus, Web of Science, ERIC, and Google Scholar as well as reference list screening. Thematic synthesis of studies in English between 2021 and 2026 was conducted. Digital designs can help to advance inclusive practices, such as accessibility, personalization and student engagement. But issue is often short-sighted and perception driven with equity challenges continuing in the areas of access, educator capacity, and student voice. Cloud platforms are not automatically inclusive; their effects depend on pedagogy, teaching support and equity-focused policies. More longitudinal and nonselective studies are required.*

Keywords: *Inclusive education, digital platforms, special education, educational technology, equity*

Introduction

Inclusive education has taken centre stage in current educational debate; this is propelled by international declarations of intent to equity, access and rights for diverse groups of learners (Ainscow, 2020; UNESCO, 2021; Semerikov et al., 2026). Amidst this scenario, digital applications have been presented as powerful instruments for changing the way teaching and learning occur in the inclusive classroom, especially in special education (Pieriboni et al., 2026; Voicu, 2026). Digital platforms digital-based systems such as learning management systems, educational apps and adaptive digital tools that enable teaching, communication or assessment are now increasingly integrated into the everyday reality of most classrooms (Selwyn, 2022).

Recent trends such as online and blended learning, assistive technologies, and personalised learning have led to increased digital use in inclusive settings (OECD, 2021; Kesar et al., 2026). Current literature emphasises the possible advantages including greater access, individualisation of learning and increased student engagement. Yet, the literature also highlights continued debates and inadequacies such as inconsistent roll out, low teacher readiness, uncertainty about efficacy for children with a variety of SEN and issues around issues of equity, privacy of data and too strong a dependence on technology (Howard et al., 2021).

The objective of this narrative review is to consolidate and review existing literature focusing on the use of digital platforms in inclusive SE classrooms. The review is concerned specifically with pedagogic uses, claims of benefit and impediment, the perspective/experience of teachers, learners' perceptions and the implications for inclusive practice. Hoped that by presenting an integrated, rather than a comprehensive systematic review of the literature, this may serve to draw out common themes and directions for future work and practice. This review is particularly timely and important, given that schools worldwide are rethinking inclusive education in the context of pervasive digitization (UNESCO, 2023).

Method

The current narrative review was undertaken in order to synthesize and analyze available literature on the use of digital platforms in inclusive education, and special education contexts specifically. A relatively loose but transparent method was chosen to facilitate thematic synthesis of differing research designs and yet uphold sufficient rigor for narrative review.

Sources of Information

A literature search on Scopus, Web of Science, ERIC, and Google Scholar was performed to identify potential articles for this study. These databases were chosen in order to uncover interdisciplinary research that intersects with education, special education, educational technology and inclusive pedagogy. We also performed a backward citation tracking by hand-searching the bibliographies of key papers to identify relevant studies that may have been missed during the database searches.

Search Strategy

Search terms and keywords included various combinations of: “digital platforms”, “educational technology”, “inclusive education”, “inclusive classroom”, “special education”, “special educational needs (SEN)”, “assistive technology” and “universal design for learning”. To further explore- relevant information, searches were adjusted by using Boolean operators (AND/OR). Limits were set to include peer-reviewed journal articles published in English from

2021-2026 mirroring the recent trends on digital education. All empirical work, theoretical papers and sound reviews were reviewed.

Selection Criteria

Studies were eligible for inclusion if they addressed the use of digital tools in inclusive or special educational settings targeted to school-aged pupils, and reported empirical evidence, or generated substantial conceptual insight related to practice pertaining to inclusion. Studies not related to education, higher and further education with no relational aspects, opinion papers without theoretical back-ups and studies with insufficient methodological information were excluded. Criteria for the selection of decisions included fit, conceptual clarity, and contribution to understanding opportunities and challenges in digital platforms in inclusive classrooms - deciding against a deep or excessively narrow inclusion.

Result and Discussion

Synthesis Analysis

Envisioning Digital Spaces in Inclusive Educations

Throughout the literature, digital platforms are generally defined as technology enhanced environments that are used to enable teaching and learning, communicate and assess learning. In the context of inclusive education, these platforms are often associated with frameworks such as Universal Design for Learning (UDL) more personalised learning and assistive technology and others (Alqarni, 2026). Researchers argue that digital tools can be viewed, not as things in and of themselves, as mediational means or mechanisms through which pedagogical activity may take place (Henriksen, 2026; Mariyono, 2026; Dang, 2026). However, there is ongoing debate with regard to definitional limits: some authors restrict the scope of such systems to learning management systems and educational applications, others include a much wider range of assistive, adaptive and communication technologies ecosystem. This theoretical discrepancy between perspectives limits comparability between studies and suggests that further refinement of the theory could be necessary in new research.

Pedagogical Advantages for Inclusive Classrooms

An important issue in the literature relates to how digital tools could facilitate inclusion, chiefly through accessibility and differentiation. Multisensory content, pace customisation, text-to-speech and visual support tend to be features favouring students with varying special educational needs (Almeqdad et al., 2023) that are constant across studies. These affordances resonate closely with inclusive pedagogy because they offer flexible ways of learning. However, while a large number of authors report significantly increased participation and engagement there are few reports on sustained academic gains (Uzorka & Odebisi, 2025). This promotes a tendency to emphasise perceived advantages at the expense of empirically observed results and reflects a gulf between pedagogical promise and proven implications

Digital Platform Utilization: Difficulties and Cons Advantages and Limitations of Using Digital Platforms

Besides the reported advantages, there are also great difficulties in the literature. One such common issue is not everyone has access to technology, often termed as the digital divide. However, socioeconomic gaps, a lack of uniform infrastructure and inavailability of devices are undermining the inclusiveness of digital platforms. Furthermore, teachers often report having received inadequate training and not enough support which may result in superficial or

dislodged applications (Scherer et al., 2021). Some academics warn that when not underpinned by deliberate pedagogical structure, digital platforms could perpetuate exclusion by favouring students with existing strong digital literacy. These criticisms reveal a tension between technological optimism and classroom practices.

Roles, Beliefs, and Professional Capacity of Teachers

Studies continue to highlight that teachers mediate use of digital platforms in inclusive environments, and the direct effect of student use on effectiveness can mask this. There is evidence that positive teacher attitude, self-efficacy and digital literacy correlate to successful integration. Nonetheless, the literature has found contradictions among teachers towards inclusion and technology; some supporting digital aids and other seeing them as additional weight. This dichotomy highlights a more important concern: technology is not the magic key to inclusion by default; it depends upon the intentions of teachers and provision from their institution (Macgilchrist et al., 2024). The problem of continuing in-service training on a sustained basis is identified as an issue.

Student Experiences and Equity Considerations

From the student point of view, digital tools are frequently seen as offering more independence and opportunities for engagement, especially with learners who have difficulties in communicating or learning. However, research on student voice is scarce and many of the studies are based on adult perceptions rather than reported experiences from students with disabilities (Bartolo et al., 2025). In addition, there are underexplored issues such as privacy of data, excessive dependence on screen-based learning and possibility of stigma through differential tools (Ahmed et al., 2025; Li et al., 2025). This disparity underscores a significant gap in the literature around ethical and equity-based analyses of digital platform use.

Implications and Future Directions

The literature points at the high potential of digital platforms for rethinking inclusive education (Navas-Bonilla et al., 2025) but also challenge to sustain genuine inclusion, as they are not intrinsically inclusive (Ainscow, 2020). Successful enactment relies on the coherence between technology design, inclusive pedagogy, teacher professional development and policy. Longitudinal designs and mixed methods, as well as clearer conceptual frameworks and more focus on learners are recommended for further study. For practice and policy, the results support that equal access to resources will need to be maintained, ongoing professional learning provided and careful oversight regarding how digital platforms are used in support rather than as a substitute for inclusive education relationships (Stalmach et al., 2024; Tamam, 2025).

Limitations

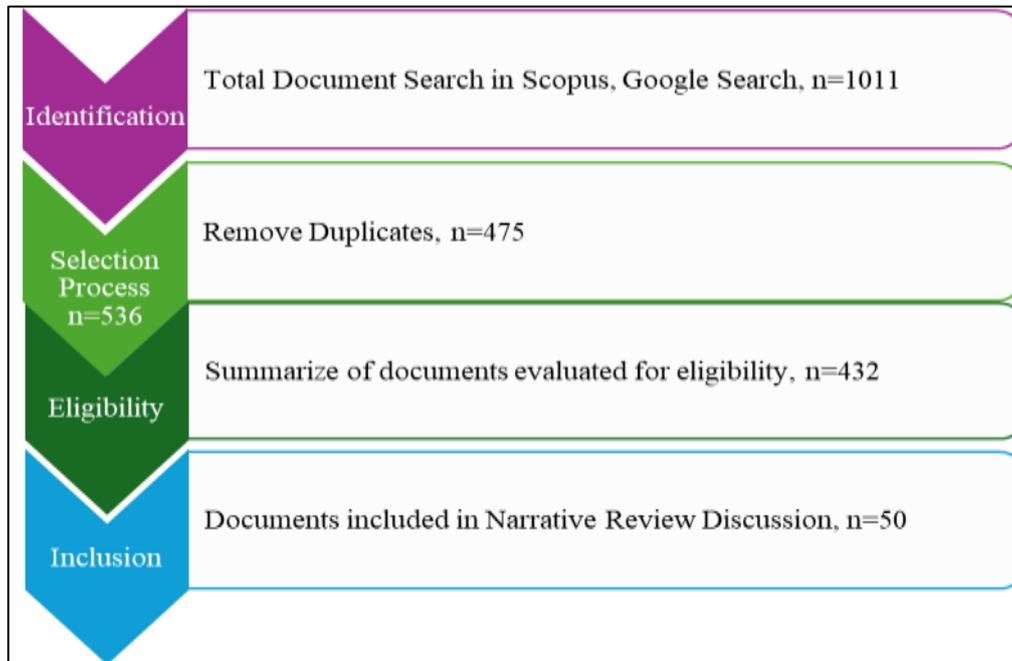


Figure 1. PRISMA-based Flow Diagram of Document Selection Process for Narrative Review

Twenty-one unique searches were executed, systematically covering theoretical, empirical and applied research on digital platforms and inclusive education.

This narrative review has several limitations that should be considered when interpreting its findings. First, from a methodological perspective, the review adopts a narrative rather than a systematic approach. While this allows for flexibility and conceptual synthesis across diverse study designs, it also limits reproducibility and increases the risk of selection bias (Page et al., 2021). The literature search, although conducted across major databases and supplemented by reference checking, may not have captured all relevant studies, particularly grey literature, non-English publications or region-specific research. Consequently, some perspectives especially from low and middle-income contexts may be underrepresented (UNESCO, 2023).

Second, the evidence base itself presents notable limitations. Much of the existing research on digital platforms in inclusive education is descriptive, small-scale or exploratory in nature. There is a predominance of qualitative studies and short-term interventions with relatively few longitudinal or experimental designs that allow for strong causal inferences. Additionally, outcomes are often measured in terms of perceptions, engagement or usability rather than sustained academic achievement or long-term inclusion outcomes. This limits the strength of conclusions regarding effectiveness and impact.

Third, synthesis was difficult because of variation in concepts and terminology used across studies. Digital platforms are also variously defined and operationalised, from learning management systems to assistive technologies, thus challenging direct comparisons. Additionally, the diversity of participant populations, educational levels and mainstream environment also makes synthesis difficult and leads to disparate results.

Possible bias may also result from publication bias (publishing positive or novel use of technology) and the interpretive role of authors in selecting themes and highlighting some. To overcome such weaknesses, future research should use more rigorous and transparent review methods, be conducted in diverse geographic locations and cultural settings, with longitudinal mixed-methods studies given preference. More transparent models of understanding and more representation from a diverse group of student experiences, especially students with disabilities, might better inform both practice and policy.

Conclusion

This narrative review aimed to describe and critically analyze extant literature on the use of digital platforms in inclusive special education classrooms with a focus on pedagogical usage, positives, negatives, and stakeholder perspectives. The synthesis shows that digital platforms have great potential in the support of inclusive education, both to improve access and differentiation, but also through generation of interest for students attending schools well anchored within frameworks such as Universal Design for Learning. At the same time, this review emphasizes recurring gaps and tensions that were identified at the outset-these include uneven implementation, lack of empirical evidence regarding effects on long-term learning outcomes, inadequate teacher preparation, and ongoing equity and ethical concerns. These results reinforce that digital platforms are not automatically inclusive, but effectiveness rather relies on purposeful pedagogical design and teacher competence (and supporting institutional/policy environments). By incorporating these different views, the review fills gaps in the literature by conceptual ambiguity, excessive focus on perceptual outcomes and insufficient consideration of student voices. Based on these findings, longitudinal and mixed-method studies on the sustained improvement of inclusive academic and social inclusion should be considered as future study areas; there is a need to develop better conceptual frameworks for digital platforms in inclusive education more closely aligned to the views of learners with disability. Also required are evidence-based professional development models and equity-led policy approaches to help digital platforms realize the promise of inclusive education rather than reinforce longstanding inequities.

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