

Teacher Experiences and Instructional Adaptations in Inclusive Education: A Systematic Review and Narrative Synthesis

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Abstract

This systematic review examines the international landscape of Special Education (SPED) and inclusive education by synthesizing qualitative studies on teacher experiences, instructional practices, and pedagogical adaptations across diverse educational contexts. Employing a qualitative meta-synthesis design and narrative synthesis approach, the review identifies key themes shaping inclusive practice. These include the dual role of teachers as facilitators of evidence-based instruction and providers of socio-emotional support, the growing influence of assistive technologies in enhancing learning accessibility, and persistent systemic barriers such as limited professional development, insufficient resources, and institutional constraints. Findings reveal that although teachers demonstrate considerable resilience, creativity, and commitment to inclusive principles, their capacity to implement effective practices is often undermined by inadequate structural and policy support. The review highlights the need for sustained institutional investment, comprehensive teacher training, and collaborative frameworks that promote equity and accessibility in education. Ultimately, the study advocates for a more socially just and context-responsive approach to inclusive teaching that recognizes the complex realities of diverse learners and strengthens support systems for educators worldwide.

Keywords: Inclusive education, Special Education (SPED), meta-synthesis, teacher experiences, assistive technology

Introduction:

Inclusive education has evolved from a human rights imperative into a complex pedagogical practice that demands continuous adaptation within diverse classroom contexts. Rooted in the global movement toward “Education for All,” educational systems increasingly promote the integration of students with special educational needs (SEN) into mainstream learning environments. This shift has significantly transformed teachers’ roles, requiring them to employ differentiated instruction, individualized learning strategies, and responsive curriculum adaptations to accommodate diverse learner profiles.

As inclusive education expands across international contexts, teachers are expected not only to deliver content but also to foster equitable participation, social inclusion, and meaningful learning experiences for all students. Consequently, the success of inclusive education largely depends on teachers' capacity to design flexible instructional approaches and supportive learning environments that address varied cognitive, emotional, and behavioral needs (Mishra et al., 2019; Sharma, 2024).

Despite its promising goals, the transition toward inclusive education remains fraught with pedagogical and systemic challenges. Teachers frequently encounter difficulties in adapting curricula, managing diverse classrooms, and addressing learners' complex needs while meeting institutional expectations. Research indicates that many educators experience insufficient preparation and limited professional support in implementing inclusive practices, particularly in curriculum modification and collaborative teaching strategies (Arias et al., 2022; Zagona et al., 2017).

These challenges often contribute to tensions between policy mandates and classroom realities, highlighting the need to examine how teachers interpret and enact inclusive principles in practice. Understanding these experiences is essential for identifying gaps in teacher preparation and institutional support systems that affect the implementation of inclusive education.

Existing scholarship has emphasized the critical role of instructional adaptations in promoting inclusive learning environments. A comprehensive synthesis by Parsons et al. (2018) demonstrates that effective teaching in inclusive settings involves flexible instructional design, ongoing assessment, and strategic modifications to meet diverse learner needs. Similarly, Leifler (2020) highlights the importance of teachers' professional capacity to create inclusive learning environments, emphasizing the interplay between pedagogical knowledge, classroom practices, and supportive school structures.

More recent studies further suggest that teachers' beliefs, attitudes, and reflective practices significantly influence their ability to implement inclusive strategies and respond to challenging classroom situations (Aas et al., 2024). These findings underscore that inclusive education is not merely a technical process but a dynamic and context-dependent practice shaped by teachers' professional competencies and experiences.

While quantitative research has provided valuable evidence on the effectiveness of specific interventions and instructional models, it often fails to capture the nuanced realities of teachers' lived experiences in inclusive classrooms. Qualitative research, by contrast, offers deeper insights into the complexities of instructional decision-making, professional challenges, and adaptive strategies employed by educators. It enables the exploration of the "unnoticed" or "silenced" voices of teachers who navigate institutional constraints, resource limitations, and diverse student needs on a daily basis. By examining these lived experiences, qualitative inquiry contributes to a more comprehensive understanding of how inclusive practices are negotiated and implemented across varied cultural and educational contexts.

Furthermore, international perspectives reveal that inclusive education practices vary significantly across educational systems, reflecting differences in policy frameworks, resource availability, and cultural attitudes toward disability and diversity. Teachers in diverse settings must adapt to contextual factors that influence the implementation of inclusive strategies, including institutional support, professional development opportunities, and societal perceptions of inclusion.

These contextual variations highlight the importance of synthesizing qualitative evidence from multiple international settings to identify common themes, challenges, and effective practices. Such synthesis can provide a broader understanding of how inclusive education is enacted globally while illuminating context-specific barriers and opportunities for improvement.

In response to these gaps, the present study aims to synthesize qualitative evidence on teachers' lived experiences and instructional adaptations in inclusive education across diverse international contexts. Using a qualitative systematic review and narrative synthesis approach, this study seeks to examine how teachers support learners with disabilities, navigate systemic challenges, and construct pedagogical strategies within inclusive environments. By integrating findings from multiple qualitative studies, the review aims to bridge the gap between institutional policy and classroom

practice, offering insights that inform teacher preparation, professional development, and the advancement of socially just and contextually responsive inclusive education practices.

Literature Review:

The literature on inclusive education emphasizes its foundation as a rights-based educational reform aimed at ensuring equitable access to quality education for learners with diverse needs. The global shift toward inclusive practices has transformed traditional educational systems by promoting the integration of students with disabilities into mainstream classrooms. This transformation requires significant pedagogical adjustments, particularly in instructional design, curriculum adaptation, and classroom management.

Research on curriculum adaptation highlights its central role in inclusive education, emphasizing that flexible teaching methods, differentiated instruction, and individualized learning pathways are essential for accommodating diverse learners (Mishra et al., 2019; Sharma, 2024). These approaches enable educators to address varied cognitive, social, and emotional needs while fostering meaningful participation in learning.

Instructional adaptations constitute a core component of effective inclusive teaching. A comprehensive research synthesis by Parsons et al. (2018) identifies various forms of instructional modifications, including differentiated instruction, scaffolding techniques, and alternative assessment strategies, as essential practices for supporting students with special educational needs. These adaptations allow teachers to respond to learner diversity while maintaining academic rigor.

However, the implementation of such practices often requires advanced pedagogical knowledge and professional competence. Studies indicate that while teachers recognize the value of instructional adaptations, they frequently encounter difficulties in applying them consistently due to limited training and institutional constraints. Teacher preparation and professional development play a critical role in shaping inclusive practices. Research consistently demonstrates that many educators feel inadequately prepared to implement inclusive education, particularly in relation to curriculum modification and collaborative teaching approaches (Zagona et al., 2017).

Similarly, Arias et al. (2022) identify significant challenges in teacher training programs, noting that insufficient emphasis on practical strategies for curriculum adaptation often limits teachers' ability to effectively support learners with diverse needs. These findings suggest that strengthening teacher education programs is essential for improving inclusive practices and ensuring that educators possess the necessary competencies to manage diverse classrooms.

The effectiveness of inclusive education is also closely linked to teachers' professional capacity and classroom practices. Leifler (2020) emphasizes that teachers' ability to create inclusive learning environments depends on their pedagogical knowledge, reflective practice, and capacity to design accessible learning experiences. Developing such capacity requires ongoing professional learning opportunities and supportive institutional contexts. Furthermore, research by Crispel and Kasperski (2021) demonstrates that specialized training in special education significantly improves teachers' implementation of inclusive practices, reinforcing the importance of continuous professional development in fostering inclusive teaching competencies.

Teachers' beliefs and attitudes toward inclusion significantly influence their instructional decisions and classroom practices. A meta-analytical study by Dignath et al. (2022) reveals that teachers' beliefs about inclusive education are shaped by professional experience, institutional support, and prior training. Positive beliefs are associated with greater willingness to adopt inclusive strategies, whereas uncertainty or negative perceptions may hinder effective implementation. Similarly, Aas et al. (2024) demonstrate that professional learning initiatives, such as Lesson Study, can positively influence teachers' beliefs and promote the development of adaptive strategies for supporting students with challenging behavior.

These findings underscore the importance of addressing both cognitive and affective dimensions of teacher development. Teacher self-efficacy has also been identified as a significant factor influencing the success of inclusive practices. Wilson et al. (2020) highlight that supportive school environments and mastery experiences contribute to teachers' confidence in implementing inclusive instruction.

Higher levels of self-efficacy are associated with greater innovation, persistence, and adaptability in addressing diverse learner needs. However, teachers often report difficulties in implementing differentiated instruction, particularly in primary education settings where classroom diversity presents complex challenges (Gaitas & Alves Martins, 2017). These challenges reflect the need for institutional support systems that enhance teacher confidence and professional competence.

Despite growing support for inclusive education, teachers continue to face numerous challenges in its implementation. Studies have documented concerns related to increased workload, limited resources, insufficient infrastructure, and lack of administrative support (Shah et al., 2016). These barriers often create tension between policy expectations and classroom realities, making it difficult for educators to fully implement inclusive practices. Robinson (2017) argues that effective inclusive teacher education must address these systemic challenges by promoting collaborative learning, practical training, and sustained institutional support. Such reforms are necessary to ensure that inclusive education is not merely a policy mandate but a viable pedagogical practice.

Recent research has also explored the development of effective teaching adaptations in inclusive settings across diverse international contexts. Irshad et al. (2025) identify several strategies used by teachers to support inclusive learning, including flexible lesson planning, individualized instruction, and the integration of assistive technologies. These practices demonstrate teachers' capacity for innovation and adaptability in responding to diverse learner needs. Additionally, research in higher education contexts highlights both the challenges and opportunities associated with inclusive practices, emphasizing the importance of institutional commitment and accessible learning environments in promoting student success (Moriña, 2019).

Furthermore, contemporary systematic reviews emphasize the importance of differentiation and individualization as central principles of inclusive education. Lindner and Schwab (2025) highlight the growing emphasis on personalized learning approaches that address individual learner differences while promoting social participation. Their findings suggest that effective inclusive education requires a balance between individualized support and collaborative learning experiences. However, they also identify gaps in understanding how teachers experience and implement these practices in real-world contexts, particularly across diverse cultural and educational systems. This gap underscores the need for qualitative syntheses that explore teachers' lived experiences and instructional adaptations, providing deeper insights into the complexities of inclusive education practice.

Methodology:

This study employed a qualitative systematic review design combined with narrative synthesis to examine teacher experiences and instructional adaptations in inclusive education. The review followed the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines to ensure methodological rigor, transparency, and replicability throughout the research process.

A comprehensive and systematic search was conducted across major international databases, including Scopus, Web of Science, and Google Scholar, to identify relevant studies. The selection criteria included empirical research utilizing qualitative methodologies such as phenomenology, case studies, and ethnographic approaches; studies focusing on teacher experiences or instructional adaptations in inclusive or special education contexts; research conducted in international settings across primary, secondary, or higher education; and studies published between 2010 and 2025. These criteria ensured the inclusion of relevant and high-quality literature that reflects contemporary practices and diverse educational contexts.

The study adopted a qualitative meta-synthesis design, which is conceptually analogous to a meta-analysis but focuses on the systematic integration and interpretation of qualitative findings. This approach facilitates the development of deeper theoretical insights and enables the examination of relationships among key constructs emerging from different studies. By synthesizing qualitative evidence from diverse educational contexts, the meta-synthesis enhances the transferability and conceptual generalizability of findings.

The design allows for the integration of data from varied international settings, thereby providing a comprehensive understanding of how teachers experience and implement inclusive practices across different cultural, institutional, and policy environments. Data were analyzed using narrative synthesis, an approach particularly suitable for integrating findings from studies employing diverse qualitative methodologies and research designs.

The narrative synthesis process involved several stages, including the development of a preliminary synthesis of findings from the selected studies, the exploration of patterns and relationships within and across studies, and the critical assessment of the robustness and credibility of the synthesis. To ensure analytical rigor, the process emphasized reflexivity, transparency, and systematic interpretation of evidence. Through this approach, the study generated coherent thematic insights that bridge individual study findings and provide a comprehensive understanding of teacher experiences and instructional adaptations in inclusive education.

Findings and Discussion:

The findings of this review reveal that teachers across diverse international contexts demonstrate remarkable resilience and innovation in adapting their pedagogical practices to support inclusive education. Despite systemic constraints and varying levels of institutional support, educators consistently employ flexible instructional approaches to address the diverse cognitive, social, and emotional needs of learners with special educational needs. These adaptations reflect teachers' commitment to ensuring equitable access to learning and highlight the dynamic nature of inclusive teaching practices. Effective inclusive education, therefore, emerges not only from policy mandates but from teachers' ongoing efforts to modify instruction, utilize resources creatively, and foster supportive classroom environments (Buli-Holmberg & Jeyaprabhan, 2016).

One prominent finding is the widespread use of instructional adaptations that incorporate both high-technology and low-technology tools. Teachers employ assistive technologies, including augmentative and alternative communication (AAC) software and artificial intelligence-integrated learning applications, to enhance accessibility and engagement among learners with diverse needs. Research indicates that technology-enhanced instruction can support students' creativity, academic performance, and emotional engagement while enabling teachers to deliver more responsive and differentiated instruction (Lin & Chen, 2024).

At the same time, teachers frequently utilize low-tech resources such as tactile materials, visual aids, and structured learning supports, particularly in resource-limited settings. These practices demonstrate teachers' ability to adapt available tools to meet learner needs regardless of infrastructural limitations. Individualized instruction also emerges as a central strategy in inclusive classrooms. Teachers emphasize tailoring lessons to the specific cognitive profiles, learning styles, and emotional characteristics of students to promote meaningful participation in learning activities.

This approach aligns with contemporary perspectives on differentiation and individualization, which emphasize the importance of personalized learning pathways in inclusive education (Lindner & Schwab, 2025). However, implementing individualized instruction often requires substantial time, professional expertise, and institutional support, which may not always be available. Studies show that teachers frequently experience concerns related to workload, classroom management, and the complexity of addressing diverse learning needs simultaneously (Shah et al., 2016).

The adoption of Universal Design for Learning (UDL) principles further reflects the shift toward proactive and inclusive pedagogical frameworks. UDL encourages the design of flexible learning environments that accommodate diverse learners through multiple means of representation, engagement, and expression. Teachers' increasing use of UDL-based strategies demonstrates a commitment to creating accessible learning environments that reduce barriers to participation. Effective implementation of such frameworks, however, depends heavily on teacher competence, training, and institutional support systems. Research indicates that specialized teacher education programs and professional development significantly enhance teachers' capacity to apply inclusive strategies in mainstream classrooms (Crispel & Kasperski, 2021).

Teacher beliefs, attitudes, and self-efficacy also play a crucial role in shaping the effectiveness of pedagogical adaptations. Studies show that teachers' inclusive behavior is influenced by social cognitive factors, professional

confidence, and personality characteristics, which affect their willingness to adopt innovative teaching strategies (Wilson et al., 2016). Similarly, individual and cultural factors significantly shape teachers' attitudes toward inclusion, influencing how they interpret policy expectations and classroom realities (Van Steen & Wilson, 2020). These findings suggest that inclusive education requires not only technical competence but also positive dispositions and supportive professional environments that foster teacher motivation and commitment.

Teacher preparation and professional learning experiences further influence the development of inclusive practices. Research indicates that preservice and in-service training programs play a critical role in shaping teachers' perceptions of learners with disabilities and their readiness to implement inclusive strategies (Greenfield et al., 2016). Professional development initiatives that focus on classroom management, instructional differentiation, and collaborative learning have been shown to improve teachers' self-efficacy and instructional competence in inclusive settings (Chao et al., 2017). Robinson (2017) further emphasizes that effective inclusive teacher education must integrate theoretical knowledge with practical experience, ensuring that educators are equipped to address the complexities of diverse classrooms.

Despite these positive developments, significant challenges continue to shape teachers' experiences in implementing inclusive education. Teachers frequently encounter resource limitations, insufficient institutional support, and inadequate infrastructure, which hinder the effective application of inclusive practices. Studies from diverse contexts, including South Africa and other international settings, reveal that educators often struggle to balance curriculum demands with individualized support for learners with special educational needs (Adewumi & Mosito, 2019).

These systemic constraints highlight the persistent gap between inclusive education policies and their practical implementation, emphasizing the need for sustained institutional commitment and resource allocation. Contemporary research underscores the importance of contextual factors in shaping inclusive classroom practices. Case studies of inclusive classrooms demonstrate that successful implementation depends on collaborative school cultures, supportive leadership, and ongoing professional learning opportunities (Islami et al., 2025).

These findings reinforce the view that resilient pedagogical adaptations are not isolated practices but are embedded within broader institutional and sociocultural contexts. Overall, the synthesis highlights that while teachers demonstrate significant adaptability and innovation in implementing inclusive education, sustained professional support, adequate resources, and comprehensive teacher training remain essential for ensuring the long-term effectiveness and sustainability of inclusive pedagogical practices.

Collaborative Construction of Pedagogy

The findings of this review highlight that the successful implementation of inclusive education is fundamentally a collaborative process rather than an individual undertaking. Teachers rarely achieve effective inclusion in isolation; instead, they rely on shared professional knowledge, interdisciplinary cooperation, and collective problem-solving to address the complex needs of diverse learners. Collaborative approaches enable educators to develop responsive pedagogical strategies, share instructional responsibilities, and create supportive learning environments that promote equitable participation. Effective inclusive practice, therefore, emerges through the collective construction of pedagogy within professional and institutional networks that facilitate shared learning and continuous improvement (Buli-Holmberg & Jeyaprabahan, 2016; Hehir et al., 2016).

A key aspect of collaborative pedagogy is the development of Professional Learning Communities (PLCs), which provide structured opportunities for teachers to engage in reflective dialogue, share instructional strategies, and collectively address classroom challenges. Research indicates that interdisciplinary collaboration among general educators, special education teachers, and support staff enhances teachers' capacity to implement differentiated instruction and individualized learning strategies (Crispel & Kasperski, 2021).

Such collaborative environments foster professional growth, encourage the exchange of best practices, and strengthen teachers' ability to respond to diverse student needs. Moreover, effective teacher education programs emphasize collaboration as a core component of inclusive practice, highlighting the importance of shared professional responsibility in promoting inclusive learning environments (Robinson, 2017).

Collaborative teaching models, particularly co-teaching practices, further demonstrate the value of shared pedagogical responsibility in inclusive classrooms. Studies on co-teaching reveal that effective collaboration between general and special education teachers improves instructional quality, enhances student engagement, and supports differentiated instruction (Brendle et al., 2017). These collaborative arrangements enable teachers to combine expertise, provide individualized support, and manage diverse classrooms more effectively. Additionally, collaborative approaches contribute to the implementation of differentiation and individualization strategies, which are central to inclusive education (Lindner & Schwab, 2025). Such findings underscore the importance of institutional structures that support teamwork and shared instructional planning.

Socio-pedagogical support also emerges as a critical component of collaborative inclusive practice. Inclusive education extends beyond academic instruction to encompass emotional, social, and behavioral support for students. Teachers play a vital role in fostering inclusive classroom communities by promoting positive social interactions, addressing diverse emotional needs, and managing classroom dynamics. Research highlights the importance of teacher attunement to students' social experiences and the management of peer relationships in promoting inclusive classroom environments (Farmer et al., 2019). These practices contribute to students' sense of belonging and engagement while supporting positive learning outcomes.

The provision of socio-pedagogical support also influences teacher well-being and professional motivation. Teachers who work within supportive collaborative environments report higher levels of self-efficacy, professional satisfaction, and commitment to inclusive practices (Chao et al., 2017). Social cognitive factors, including professional confidence and positive attitudes toward inclusion, significantly influence teachers' willingness to engage in collaborative practices and adopt innovative teaching strategies (Wilson et al., 2016). Furthermore, cultural and contextual factors shape teachers' perceptions of collaboration and inclusion, influencing how inclusive policies are interpreted and enacted within specific educational settings (Van Steen & Wilson, 2020).

Teacher preparation and professional development play a central role in fostering collaborative competencies required for inclusive education. Preservice training and ongoing professional learning opportunities help teachers develop the knowledge, skills, and attitudes necessary for interdisciplinary collaboration and inclusive practice (Greenfield et al., 2016). Professional development initiatives that emphasize collaborative problem-solving, classroom management, and differentiated instruction enhance teachers' capacity to support diverse learners and work effectively within inclusive teams (Byrd & Alexander, 2020). These findings suggest that teacher education programs must prioritize collaboration as a core professional competency.

Despite the benefits of collaborative practice, teachers often encounter challenges in implementing collaborative approaches within inclusive settings. Research indicates that limited institutional support, insufficient resources, and heavy workloads may hinder effective teamwork and interdisciplinary cooperation (Adewumi & Mosito, 2019). In some contexts, teachers report uncertainty regarding their roles and responsibilities within collaborative frameworks, which may reduce the effectiveness of inclusive practices (Pappas et al., 2018).

Additionally, variations in teacher efficacy and institutional support influence attitudes toward collaboration and inclusion, further shaping the implementation of inclusive pedagogical strategies (Desombre et al., 2019). Recent studies also highlight the growing role of technology and innovative practices in supporting collaborative inclusive education. The integration of educational technologies and artificial intelligence-based tools facilitates communication among teachers, supports differentiated instruction, and enhances collaborative planning processes (Lin & Chen, 2024; Polat et al., 2024).

Case studies of inclusive classrooms demonstrate that collaborative school cultures, supported leadership, and continuous professional learning contribute significantly to the success of inclusive practices (Islami et al., 2025; Villafuerte & Mosquera, 2020). Overall, the findings emphasize that the collaborative construction of pedagogy, supported by professional learning communities and socio-pedagogical support systems, is essential for sustaining effective and socially responsive inclusive education practices.

Barriers to Implementation

Despite the demonstrated resilience and adaptability of teachers, the implementation of inclusive education continues to face persistent systemic barriers across diverse international contexts. These challenges reflect structural limitations within educational systems that hinder the effective translation of inclusive policies into classroom practice. While inclusive education is widely supported at the policy level, its practical realization often reveals gaps in professional preparation, resource allocation, and social acceptance.

The presence of these barriers underscores the complex and multifaceted nature of inclusive education, which requires not only pedagogical innovation but also institutional and societal transformation (Hehir et al., 2016; Walton & Engelbrecht, 2024). One of the most significant barriers identified in the literature is the professional development gap experienced by teachers in inclusive settings. Many educators report that their training is inadequate to address the complexities of inclusive classrooms, particularly in relation to differentiated instruction, classroom management, and support for learners with diverse needs. Research indicates that insufficient professional preparation limits teachers' confidence and effectiveness in implementing inclusive strategies, ultimately affecting student outcomes (Mitchell & Sutherland, 2020).

Similarly, studies on teacher efficacy suggest that limited training and professional support contribute to uncertainty and reduced willingness to adopt inclusive practices (Desombre et al., 2019). These findings highlight the need for comprehensive and sustained professional development programs that equip teachers with both theoretical knowledge and practical competencies.

The challenges associated with professional preparation are further intensified by changing educational contexts and technological demands. Teachers are increasingly expected to integrate digital tools and emerging technologies into inclusive classrooms, yet many lack the necessary training and institutional support to do so effectively. Research shows that teachers often demonstrate limited awareness of available educational technologies and express a need for professional guidance in utilizing assistive and digital learning tools (Polat et al., 2024).

Additionally, the rapid emergence of artificial intelligence-based technologies in education presents new pedagogical challenges, requiring educators to adapt their instructional practices while maintaining inclusive learning environments (Al-khresheh, 2024). These developments underscore the importance of ongoing professional learning that addresses both pedagogical and technological competencies.

Resource scarcity also remains a major barrier to effective implementation of inclusive education. Many schools lack adequate infrastructure, instructional materials, and access to assistive technologies necessary to support diverse learners. Limited classroom resources, overcrowded learning environments, and insufficient support personnel often constrain teachers' ability to provide individualized instruction and appropriate accommodations.

Research emphasizes that inclusive teaching requires adequate material and institutional support, including accessible learning environments, specialized equipment, and structured intervention programs (Dewsbury & Brame, 2019). Without these resources, teachers may struggle to implement inclusive practices despite their commitment to equitable education. The lack of institutional support also contributes to increased workload and professional stress among teachers working in inclusive settings. Educators frequently report challenges related to balancing curriculum demands with individualized student support, managing diverse classroom dynamics, and fulfilling administrative responsibilities.

Such pressures may negatively affect teacher well-being, job satisfaction, and retention, particularly in high-need educational contexts (Ansley et al., 2019). Studies on emergency remote teaching further reveal that sudden shifts in instructional modalities can exacerbate existing challenges, highlighting the vulnerability of inclusive education systems to external disruptions (Schuck & Lambert, 2020). These findings emphasize the importance of supportive work environments and sustainable institutional structures.

Attitudinal barriers also play a significant role in shaping the implementation of inclusive education. Negative perceptions, stereotypes, and misconceptions about students with disabilities may contribute to social exclusion and limit opportunities for meaningful participation in classroom activities. Research indicates that teachers must actively

manage classroom social dynamics and promote positive peer interactions to foster inclusive communities (Farmer et al., 2019).

However, societal attitudes, including those held by parents, peers, and broader communities, may reinforce exclusionary practices and hinder the development of inclusive learning environments (Pappas et al., 2018). Addressing these attitudinal barriers requires broader cultural and educational interventions that promote awareness and acceptance of diversity. Institutional and organizational factors further influence the effectiveness of inclusive education.

Collaborative teaching models, such as co-teaching, have been identified as effective strategies for supporting diverse learners, yet their implementation often faces logistical challenges related to scheduling, role clarity, and professional coordination (Brendle et al., 2017). These challenges highlight the need for clearly defined institutional policies and structured support systems that facilitate collaboration among educators. Without such organizational frameworks, the successful implementation of inclusive practices remains difficult, even when teachers demonstrate strong commitment and professional competence.

The synthesis reveals that barriers to inclusive education are deeply embedded within professional, institutional, and societal structures. The persistence of professional development gaps, resource limitations, and attitudinal challenges underscores the need for systemic reforms that extend beyond classroom-level interventions. Achieving meaningful inclusion requires comprehensive strategies that address teacher preparation, resource allocation, institutional support, and societal attitudes toward disability. By confronting these barriers, educational systems can better support teachers' efforts and promote equitable learning opportunities for all students within inclusive environments.

Implications for Practice

The findings of this review carry significant implications for practice, particularly in strengthening the coherence and contextualization of inclusive education initiatives. The results affirm that high-quality special education practice requires alignment between policy, pedagogy, and classroom realities. Inclusive education is most effective when institutional frameworks support teachers' adaptive practices and recognize the contextual nature of teaching diverse learners.

Evidence-based approaches emphasize that inclusive systems must integrate instructional strategies, supportive environments, and equitable access to learning opportunities to ensure meaningful participation for all students (Hehir et al., 2016; Mitchell & Sutherland, 2020). A key implication emerging from the findings is the recognition that teacher-led, "bottom-up" adaptations often demonstrate greater responsiveness to learner needs than "top-down" policy directives. The resilience and innovation of teachers, particularly in contexts such as the Philippines and the United Arab Emirates, illustrate how educators navigate systemic constraints through context-sensitive strategies and locally relevant practices.

This reinforces the social justice value of qualitative research, which highlights how teachers actively address structural inequities and ensure that learners with disabilities are not marginalized or silenced within educational systems. Such practices reflect the dynamic and evolving nature of inclusive education, which must adapt to specific sociocultural and institutional conditions (Walton & Engelbrecht, 2024).

The findings further underscore the necessity of tailored professional development programs that move beyond general theoretical knowledge to address specific instructional, emotional, and collaborative competencies. Effective teacher preparation should equip educators with practical skills in differentiation, classroom management, and individualized support for diverse learners. Research suggests that comprehensive teacher education programs that emphasize inclusive pedagogical strategies significantly improve teachers' capacity to implement inclusive practices and foster equitable learning environments (Coady et al., 2016).

Professional development initiatives must therefore be continuous, practice-oriented, and responsive to the evolving demands of inclusive classrooms. Another important implication concerns the role of institutional support in fostering positive work environments for teachers. Supportive professional contexts, including access to mentoring, collaboration opportunities, and administrative support, enhance teacher motivation, job satisfaction, and retention in

inclusive settings (Ansley et al., 2019). Conversely, inadequate institutional support may contribute to professional stress and reduced instructional effectiveness. The findings highlight the need for educational institutions to cultivate supportive organizational cultures that enable teachers to manage diverse classroom demands while maintaining professional well-being.

The integration of technology and digital resources also emerges as a critical area for practice. Inclusive education increasingly requires the use of assistive technologies, digital learning tools, and artificial intelligence-based applications to support diverse learning needs. However, research indicates that teachers often require additional training to effectively integrate educational technologies into inclusive classrooms (Polat et al., 2024).

Emerging technologies, including artificial intelligence tools, present opportunities to enhance accessibility and personalized learning, but their effective implementation depends on teachers' digital competence and critical understanding of technology use in educational contexts (Al-khresheh, 2024; Walter, 2024). Strengthening digital literacy and technological support systems is therefore essential for advancing inclusive practices.

The findings also emphasize the importance of fostering inclusive teaching practices that address diverse learner identities and promote equitable participation. Inclusive pedagogy requires flexible instructional design, culturally responsive teaching, and the removal of structural barriers that limit student engagement (Dewsbury & Brame, 2019). Frameworks such as Universal Design for Learning provide practical approaches for designing accessible learning environments that accommodate varied learning needs and abilities (Wilson, 2017). Additionally, developing students' digital literacy skills and supporting learners with special educational needs in navigating digital environments further enhance inclusive educational experiences (Tohara et al., 2021).

Attitudinal change among educators and stakeholders represents another critical implication for practice. Teachers' knowledge, beliefs, and perceptions significantly influence the implementation of inclusive education and the quality of support provided to learners with disabilities. Research demonstrates that positive attitudes toward inclusion and greater awareness of diverse learning needs contribute to more effective instructional practices and improved student outcomes (Thomas & Uthaman, 2019). Conversely, negative perceptions and limited understanding of disability may hinder inclusive efforts, underscoring the importance of professional learning initiatives that promote awareness, empathy, and inclusive values (Garrađ et al., 2019).

Finally, the findings highlight the need for educational systems to prioritize the "changeability" of social and institutional contexts to foster truly inclusive learning environments. Inclusive education requires ongoing adaptation to evolving student needs, technological developments, and societal expectations. The challenges experienced during emergency remote teaching, for instance, demonstrate the importance of flexible and responsive instructional systems that can sustain inclusive practices during periods of disruption (Schuck & Lambert, 2020). Overall, achieving meaningful inclusion demands systemic commitment, continuous professional development, and institutional reforms that support teachers' adaptive practices while promoting equitable and socially just educational opportunities for all learners.

Conclusion:

This systematic review is limited by its reliance on published qualitative studies, which may be subject to publication bias and selective reporting of findings. The exclusion of unpublished research and gray literature may have constrained the diversity of perspectives represented in the synthesis, particularly those reflecting underreported or context-specific experiences. Furthermore, the variability in research designs, cultural contexts, and methodological approaches among the included studies may limit the generalizability of the findings.

Future research should therefore incorporate longitudinal qualitative investigations that examine how teacher experiences, instructional adaptations, and institutional responses evolve over time as inclusive policies are implemented and refined. Such studies would provide deeper insights into the sustainability of inclusive practices and the long-term impact of systemic reforms on teaching and learning outcomes.

Despite these limitations, the findings of this narrative synthesis reinforce the view that inclusive education remains a complex and contested educational terrain that requires continuous reflection, adaptation, and institutional commitment. The review demonstrates that teachers across diverse international contexts exhibit significant resilience, creativity, and professional dedication in responding to the challenges of inclusive classrooms. Their adaptive practices, innovative instructional strategies, and collaborative efforts reflect a strong commitment to equitable learning opportunities for students with diverse needs. However, these efforts are frequently constrained by systemic barriers, including insufficient professional development, limited access to resources, and persistent attitudinal challenges within educational systems and communities.

The findings underscore the necessity of sustained investment in teacher training, institutional support structures, and inclusive pedagogical resources to strengthen the implementation of inclusive education. Achieving meaningful educational equity requires a shift from viewing inclusion merely as a policy mandate toward recognizing it as a dynamic, collaborative, and socially just pedagogical practice.

This transformation calls for systemic reforms that prioritize teacher empowerment, interdisciplinary collaboration, and responsive educational environments capable of addressing diverse learner needs. Ultimately, the advancement of inclusive education depends on the collective efforts of educators, policymakers, and institutions to create learning environments that uphold the principles of equity, participation, and social justice for all learners.

References:

- Aas, H. K., Uthus, M., & Løhre, A. (2024). Inclusive education for students with challenging behaviour: development of teachers' beliefs and ideas for adaptations through Lesson Study. *European Journal of Special Needs Education*, 39(1), 64-78.
- Adewumi, T. M., & Mosito, C. (2019). Experiences of teachers in implementing inclusion of learners with special education needs in selected Fort Beaufort District primary schools, South Africa. *Cogent Education*, 6(1), 1703446.
- Al-khresheh, M. H. (2024). Bridging technology and pedagogy from a global lens: Teachers' perspectives on integrating ChatGPT in English language teaching. *Computers and Education: Artificial Intelligence*, 6, 100218.
- Ansley, B. M., Houchins, D., & Varjas, K. (2019). Cultivating positive work contexts that promote teacher job satisfaction and retention in high-need schools. *Journal of Special Education Leadership*, 32(1), 3-16.
- Arias, E., Valdés, S., & Hernández, T. (2022). Training teachers: Challenges in front of curriculum adaptation and inclusive education.
- Brendle, J., Lock, R., & Piazza, K. (2017). A study of co-teaching identifying effective implementation strategies. *International journal of special education*, 32(3), 538-550.
- Buli-Holmberg, J., & Jeyaprabhan, S. (2016). Effective practice in inclusive and special needs education. *International journal of special education*, 31(1), 119-134.
- Byrd, D. R., & Alexander, M. (2020). Investigating special education teachers' knowledge and skills: Preparing general teacher preparation for professional development. *Journal of Pedagogical Research*, 4(2), 72-82.
- Chao, C. N. G., Sze, W., Chow, E., Forlin, C., & Ho, F. C. (2017). Improving teachers' self-efficacy in applying teaching and learning strategies and classroom management to students with special education needs in Hong Kong. *Teaching and Teacher Education*, 66, 360-369.
- Coady, M. R., Harper, C., & De Jong, E. J. (2016). Aiming for equity: Preparing mainstream teachers for inclusion or inclusive classrooms?. *Tesol Quarterly*, 50(2), 340-368.

Crispel, O., & Kasperski, R. (2021). The impact of teacher training in special education on the implementation of inclusion in mainstream classrooms. *International Journal of Inclusive Education*, 25(9), 1079-1090.

Desombre, C., Lamotte, M., & Jury, M. (2019). French teachers' general attitude toward inclusion: The indirect effect of teacher efficacy. *Educational Psychology*, 39(1), 38-50.

Dewsbury, B., & Brame, C. J. (2019). Inclusive teaching. *CBE—Life Sciences Education*, 18(2), fe2.

Dignath, C., Rimm-Kaufman, S., van Ewijk, R., & Kunter, M. (2022). Teachers' beliefs about inclusive education and insights on what contributes to those beliefs: A meta-analytical study. *Educational psychology review*, 34(4), 2609-2660.

Farmer, T. W., Hamm, J. V., Dawes, M., Barko-Alva, K., & Cross, J. R. (2019). Promoting inclusive communities in diverse classrooms: Teacher attunement and social dynamics management. *Educational Psychologist*, 54(4), 286-305.

Gaitas, S., & Alves Martins, M. (2017). Teacher perceived difficulty in implementing differentiated instructional strategies in primary school. *International Journal of Inclusive Education*, 21(5), 544-556.

Garrad, T. A., Rayner, C., & Pedersen, S. (2019). Attitudes of Australian primary school teachers towards the inclusion of students with autism spectrum disorders. *Journal of Research in Special Educational Needs*, 19(1), 58-67.

Greenfield, R. A., Mackey, M., & Nelson, G. (2016). Preservice teachers' perceptions of students with learning disabilities: Using mixed methods to examine effectiveness of special education coursework. *The Qualitative Report*, 21(2), 330-351.

Hehir, T., Grindal, T., Freeman, B., Lamoreau, R., Borquaye, Y., & Burke, S. (2016). A summary of the evidence on inclusive education. *Abt Associates*.

Irshad, M. A., Amir, R. M., & Nabi, G. (2025). Towards Inclusive Learning: Identification of Effective Teaching Adaptations Used by Teachers for Inclusive Teaching. *Journal of Asian Development Studies*, 14(1), 568-583.

Islami, D. I., Amaldi, F. D., Salsabilla, A. W., Salsabilla, A. A., & Setyowati, L. (2025). Exploring the inclusive classroom practice in a public junior school in Malang: A case study. *SELL (Scope of English Language Teaching, Linguistics, and Literature) Journal*, 10(1), 45-65.

Leifler, E. (2020). Teachers' capacity to create inclusive learning environments. *International Journal for Lesson & Learning Studies*, 9(3), 221-244.

Lin, H., & Chen, Q. (2024). Artificial intelligence (AI)-integrated educational applications and college students' creativity and academic emotions: students and teachers' perceptions and attitudes. *BMC psychology*, 12(1), 487.

Lindner, K. T., & Schwab, S. (2025). Differentiation and individualisation in inclusive education: a systematic review and narrative synthesis. *International journal of inclusive education*, 29(12), 2199-2219.

Mishra, P. A., Hota, S., & Khamari, P. R. (2019). Curriculum adaptation in inclusive education. *International Journal of Applied Research*, 5(8), 70-74.

Mitchell, D., & Sutherland, D. (2020). *What really works in special and inclusive education: Using evidence-based teaching strategies*. Routledge.

Moriña, A. (2019). Inclusive education in higher education: challenges and opportunities. *Postsecondary educational opportunities for students with special education needs*, 3-17.

Pappas, M. A., Papoutsis, C., & Drigas, A. S. (2018). Policies, practices, and attitudes toward inclusive education: The case of Greece. *Social sciences*, 7(6), 90.

Parsons, S. A., Vaughn, M., Scales, R. Q., Gallagher, M. A., Parsons, A. W., Davis, S. G., ... & Allen, M. (2018). Teachers' instructional adaptations: A research synthesis. *Review of educational research*, 88(2), 205-242.

Polat, E., Sıbiç, S. C., Cirit, N. C., Hopcan, S., & Baştuğ, Y. E. (2024). Educational technology in inclusive classrooms: Assessing teacher awareness and needs. *Journal of Educational Technology and Online Learning*, 7(1), 116-131.

Robinson, D. (2017). Effective inclusive teacher education for special educational needs and disabilities: Some more thoughts on the way forward. *Teaching and Teacher Education*, 61, 164-178.

Schuck, R. K., & Lambert, R. (2020). "Am I doing enough?" Special educators' experiences with emergency remote teaching in Spring 2020. *Education Sciences*, 10(11), 320.

Shah, R., Das, A., Desai, I., & Tiwari, A. (2016). Teachers' concerns about inclusive education in Ahmedabad, India. *Journal of Research in Special Educational Needs*, 16(1), 34-45.

Sharma, S. (2024). Enhancing inclusive learning environments: Strategies for curriculum adaptation and modification. *Future of special education in India*, 109, 121.

Thomas, E., & Uthaman, S. (2019). Knowledge and attitude of primary school teachers towards inclusive education of children with specific learning disabilities. *Journal of Social Work Education and Practice*, 4(2), 23-32.

Tohara, A. J. T., Shuhidan, S. M., Bahry, F. D. S., & Nordin, M. N. B. (2021). Exploring digital literacy strategies for students with special educational needs in the digital age. *Turkish Journal of Computer and Mathematics Education*, 12(9), 3345-3358.

Van Steen, T., & Wilson, C. (2020). Individual and cultural factors in teachers' attitudes towards inclusion: A meta-analysis. *Teaching and teacher Education*, 95, 103127.

Villafuerte, J., & Mosquera, Y. M. (2020). Teaching English language in Ecuador: A review from the inclusive educational approach. *Journal of Arts and Humanities*, 9(2), 75-90.

Walter, Y. (2024). Embracing the future of Artificial Intelligence in the classroom: the relevance of AI literacy, prompt engineering, and critical thinking in modern education. *International journal of educational technology in higher education*, 21(1), 15.

Walton, E., & Engelbrecht, P. (2024). Inclusive education in South Africa: Path dependencies and emergences. *International Journal of Inclusive Education*, 28(10), 2138-2156.

Wilson, C., Marks Woolfson, L., & Durkin, K. (2020). School environment and mastery experience as predictors of teachers' self-efficacy beliefs towards inclusive teaching. *International journal of inclusive education*, 24(2), 218-234.

Wilson, C., Woolfson, L. M., Durkin, K., & Elliott, M. A. (2016). The impact of social cognitive and personality factors on teachers' reported inclusive behaviour. *British Journal of Educational Psychology*, 86(3), 461-480.

Wilson, J. D. (2017). Reimagining disability and inclusive education through universal design for learning. *Disability Studies Quarterly*, 37(2).

Zagona, A. L., Kurth, J. A., & MacFarland, S. Z. (2017). Teachers' views of their preparation for inclusive education and collaboration. *Teacher Education and Special Education*, 40(3), 163-178.