



ORIGINAL ARTICLE

Effect of Teacher Education Initiatives in Shaping Preservice Teachers' Perceptions of and Self-Efficacy in Implementing Inclusive Education

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Abstract

Inclusive education, a foundation of modern educational discourse, requires progressive approaches that extend beyond cultural boundaries and promote effective, collaborative learning environments. In this systematic review, we thoroughly examine preservice teachers' readiness for inclusive education by analysing how their attitudes, experiences, and training shape their perceptions and self-efficacy. Drawing on studies from the past two decades, we report generally positive attitudes toward inclusive practices alongside challenges such as limited practical experience, time constraints, and insufficient institutional support. In this review, we critique current tools for measuring teacher self-efficacy and call for more comprehensive, culturally responsive approaches. Findings indicate that although formal training fosters positive attitudes, its impact is maximised when combined with authentic teaching experiences. Overall, this systematic review underscores the need for an integrated teacher education strategy that bridges theory and practice, thereby equipping teachers with the skills and confidence to meet students with diverse needs.

Keywords: inclusive education; self-efficacy; teacher education; preservice teachers; systematic review; teacher attitudes

In contemporary educational discourse, inclusive education principles have gained substantial recognition and international endorsement, aligning closely with human rights agendas as evidenced by seminal agreements such as the Salamanca Statement (UNESCO, 1994), the Dakar Framework for Action (UNESCO, 2000), and the Convention on the Rights of Persons with Disabilities (United Nations, 2006). Governments worldwide have responded by enacting legislative measures aimed at upholding the educational rights of diverse communities (Allday et al., 2013; Ydo, 2020). However, despite these efforts, practical implementation remains challenging, with persistent barriers hindering the realisation of international commitments (UNESCO, 2020; UNICEF, 2017). Scholarly definitions of inclusive education highlight its core principles of removing barriers to learning, fostering equity, and supporting all students according to their individual needs (Almalky & Alwahbi, 2023; Takala & Sirkko, 2022; Yada et al., 2018). Research consistently affirms the benefits of inclusive practices for students with diverse learning needs (Krischler et al., 2019; Sharma & Jacobs, 2016; Starczewska et al., 2012). Despite being enshrined in legislation across many nations, the efficacy of inclusive education hinges significantly on the quality of teacher training (Hassanein et al., 2021; Muhammad, 2020a; Muhammad & Liu, 2024). The attitudes, beliefs, and perspectives of future educators are pivotal in shaping the success of inclusive practices (Dignath et al., 2022; Muhammad, 2020b; Muhammad, 2025;

Woodcock et al., 2022). However, demographic variables and specific characteristics of educational programs exert notable influence on these attitudes (Boyle et al., 2023; Massé et al., 2022; Massouti, 2021; Muhammad, 2021; Muhammad & Liu, 2025; Sharma et al., 2006). Personal experiences and educational backgrounds intersect to shape preservice teachers' perspectives on inclusion, with deficiencies in teacher education curricula identified as potential obstacles (Romero-Contreras et al., 2013). Moreover, Auhl and Bain (2021) conducted a comprehensive analysis of teacher preparation programs for inclusion and found that despite national accreditation standards, these programs were insufficient in developing the necessary schema for inclusive teaching practices. Their study revealed significant gaps, reinforcing the need for program restructuring to equip future educators with the skills required to meet the demands of inclusive classrooms. Preservice teachers perceive inclusion as a collaborative policy practice that honours the diversity of learners and underscores the importance of ensuring adequate resources (Massé et al., 2022). In this study, we examine the perceptions and preparedness of preservice teachers in teacher education programs for inclusive education. While our analysis broadly encompasses preservice teachers across various educational levels, it places a particular focus on secondary education contexts. This specific emphasis allows for an in-depth exploration of diverse experiences and factors that shape teacher readiness for inclusive practices. Nevertheless, the principles and findings discussed herein are broadly applicable to inclusive education across the secondary education level, and relevant studies from all stages were considered where they contributed to the overarching themes of teacher perceptions and self-efficacy in inclusive education. Mentorship plays an essential role in shaping positive attitudes toward inclusion, with direct guidance from mentors proving to be highly influential (Boyle et al., 2023). Furthermore, the restructuring of teacher education curricula is essential to better prepare preservice teachers for inclusive teaching practices (Park et al., 2016). Although preservice teachers generally exhibit positive attitudes toward inclusion, these attitudes are influenced by a range of factors, including personal experiences, the quality of teacher education programs, collaborative initiatives, and practical teaching experiences (Avissar, 2012; Koliqi et al., 2023; Sharma & Sokal, 2015; Wray et al., 2022). It is important to note that although aspects of special education training and practicum experiences feature in many studies included in the review, our study examines inclusive education as a holistic framework designed to address the needs of all learners, not solely those with disability. In this study, we examine preservice teachers' perceptions, attitudes, and beliefs regarding inclusive education, acknowledging their significance for both the individuals involved and the broader educational landscape (AlMahdi & Bukamal, 2019; Hassanein et al., 2021). We also seek to understand how teacher training programs cultivate positive attitudes toward inclusion and assess the necessity of supportive environments within these programs (Saloviita, 2015; Sharma et al., 2021; Varcoe & Boyle, 2014). Additionally, we explore the variability in perceptions among preservice teachers and highlight research gaps related to the development of comprehensive teacher education programs specifically designed for inclusion, as well as the diversity in such programs (Avissar, 2012; Koliqi et al., 2023; Malinen et al., 2012; Sharma & Sokal, 2015; Wray et al., 2022). This systematic review aims to provide valuable insights for future research and policy development in the field of inclusive teacher education. Moreover, this study provides a comprehensive examination of the landscape of teacher education for inclusion, emphasising the crucial role of preservice teachers and their perspectives, beliefs, and attitudes in shaping this field. The findings are anticipated to yield valuable insights into the effectiveness of teacher training programs and highlight the necessity of creating supportive environments to foster positive attitudes toward inclusion, thereby contributing to the advancement of inclusive education practices.

The purpose of this study is to address the following guiding questions:

1. How do specific teacher education initiatives influence preservice teachers' perceptions of inclusive education effectiveness?
2. What factors within teacher education initiatives shape preservice teachers' self-efficacy in implementing inclusive education?

3. What measurement tools were employed to assess preservice teachers' self-efficacy in the context of inclusive education, and how do these measurements inform teacher education initiatives?

Method

Identifying Search Criteria and Procedure

The key search terms employed in this study were meticulously selected to align with the research questions and the specific focus of the systematic literature review, in which we aimed to investigate preservice social studies teachers' perspectives on inclusion. Although the initial search terms included 'social studies perspectives', the focus of this review is not restricted to social science teachers. Instead, it encompasses preservice teachers in general. The intention was to capture a broad spectrum of studies related to inclusive education across all subject specialisations and educational levels. Therefore, the findings apply to preservice teachers at large, beyond any specific subject focus. The selected key terms included 'Teacher' (referring to individuals engaged in teaching), 'Education', and 'Prepar*' OR 'Training' (capturing articles related to teachers' educational background, training, and preparation). The term 'Inclusi*' was used to encompass the concept of inclusive education, with a focus on the participation and support of students with diverse abilities in mainstream classrooms. The terms 'Perspective' OR 'Attitude' were aimed at identifying articles that explore preservice teachers' viewpoints toward inclusion. 'Pre-service' referred to individuals undergoing teacher training, and 'Undergraduate' denoted the educational level associated with preservice teachers. Additionally, the phrase 'Inclusive Education' was included to ensure coverage of articles related to this broader concept. This combination of key search terms facilitated a comprehensive strategy for locating relevant literature on preservice social studies teachers' perspectives toward inclusion, addressing various aspects such as perceptions, attitudes, educational background, and training.

Following the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) 2020 guidelines (Page et al., 2021), the first author carried out a thorough search across reputable databases. This extensive search process initially identified 1,419 studies, which were subsequently reviewed for relevance by three independent researchers. Strict inclusion criteria were applied, resulting in 37 studies being selected for inclusion in the systematic review. To ensure relevance (see [supplementary material](#)), these criteria were rigorously enforced and included the alignment of the studies with preservice social studies teachers' perspectives toward inclusion; a publication date range from January 2000 to October 2023 to examine a transformative era in inclusive education, initiated by the Dakar Framework for Action (UNESCO, 2000) and the Salamanca Statement (UNESCO, 1994); and adherence to rigorous research methodologies (quantitative, qualitative, or mixed methods) that focused on examining preservice teachers' attitudes, perspectives, or knowledge regarding inclusion. The review was further refined by limiting the scope to English-language articles, facilitating access to a diverse range of high-quality international research and streamlining the review process within the defined parameters. During the screening process, five studies were excluded due to inaccessibility or retrieval issues, and 139 were eliminated for reasons such as unsuitable samples, irrelevant findings, or inappropriate article types. Ultimately, 32 studies were included, providing significant insights into preservice social studies teachers' perspectives on inclusion through various research designs, methodologies, and theoretical frameworks. This rigorous adherence to PRISMA guidelines enhances the reliability and comprehensiveness of the review's findings, ensuring transparency and replicability in the research process. The final selection of 32 studies, carefully chosen based on clearly defined eligibility criteria (see Figure 1), establishes a solid and comprehensive evidence base that significantly contributes to addressing the research questions concerning preservice social studies teachers' perspectives on inclusion.

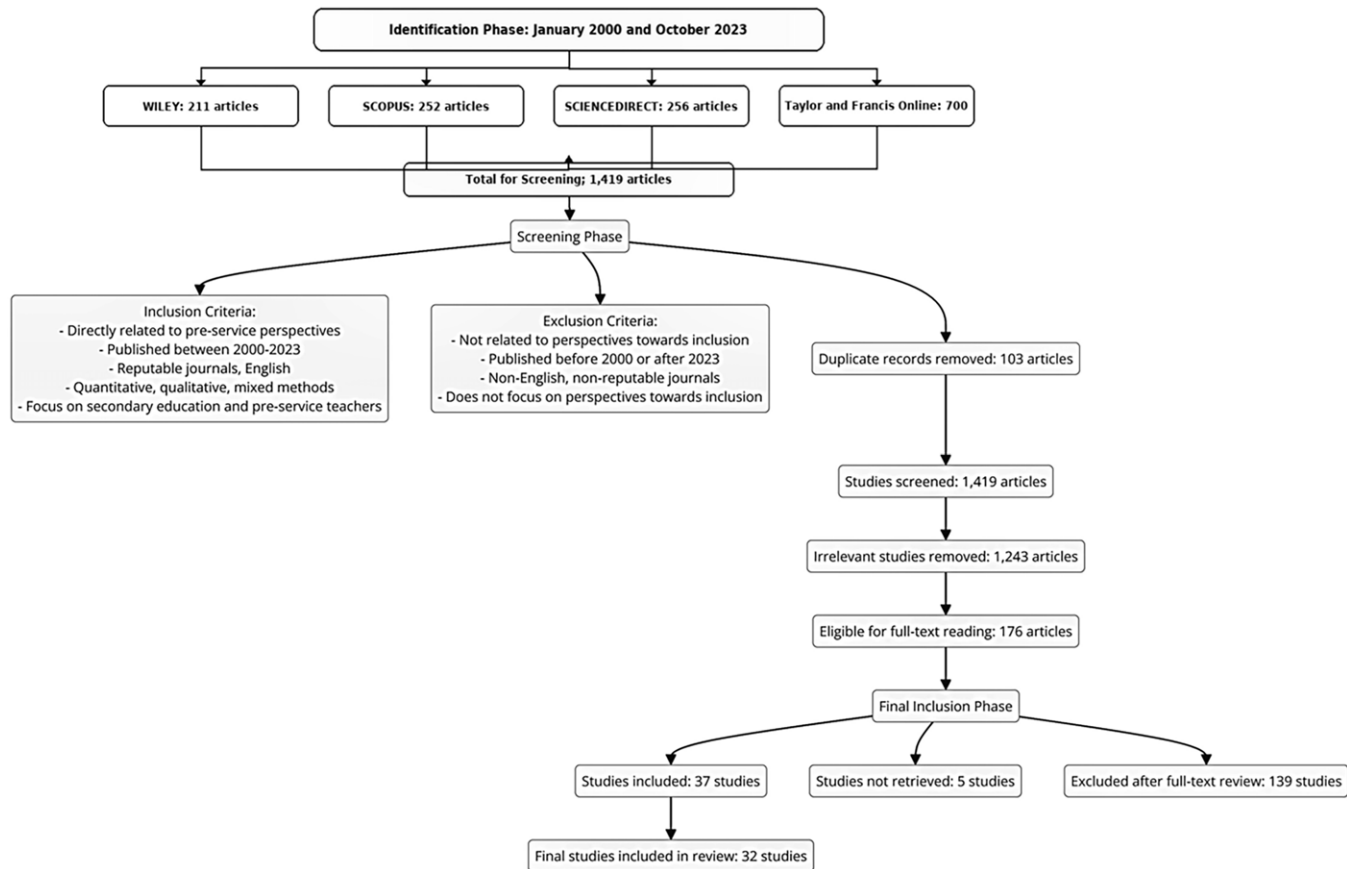


Figure 1. Study Selection Process for Preservice Teachers' Perspectives on Inclusion, Guided by PRISMA 2020.

Data Extraction

Ensuring consistency and reducing bias in a systematic literature review is crucial for maintaining the integrity of research findings. To this end, a comprehensive paper selection process comprising title screening, abstract screening, and full-text screening was meticulously carried out by three independent researchers (Temple, 2006). This rigorous process resulted in the selection of 32 articles that met the predefined inclusion criteria. To further strengthen the reliability and transparency of the review's outcomes, an anonymous review was conducted by three independent evaluators. Researcher A, the primary author of the synthesis, achieved a high agreement rate of 94%. Additionally, two other respected education researchers from the Huazhong University of Science and Technology contributed to the review process. Researcher B, with a PhD in education science, had a 91% agreement rate; Researcher C, a distinguished professor in the field, demonstrated a 93% concordance in their independent evaluations. The combined average agreement rate of approximately 92.67% indicates substantial consensus among these experts, reinforcing the robustness and credibility of the synthesised findings. This measure reflects the percentage of agreement across the evaluators during the full-text screening phase, calculated by averaging the individual agreement rates of Researcher A (94%), Researcher B (91%), and Researcher C (93%).

Results

Impact of Preservice Teachers' Attitudes, Experiences, and Training on Their Perceptions of Inclusive Education

The reviewed literature suggests that preservice teachers who hold positive attitudes toward inclusion tend to have more favourable perceptions of inclusive education. However, it is important to interpret these associations with caution since most evidence is correlational rather than causative. Several studies have indicated that these positive attitudes may influence perceptions of the effectiveness of teacher education for inclusion (Takala & Sirkko, 2022). For example, Bills and Mills (2020) reported that some preservice teachers with initially negative attitudes experienced improvements in their perceptions following participation in inclusion programs, suggesting that such attitudes might be malleable under the right conditions.

Direct teaching experiences with students with additional learning needs and opportunities to observe inclusive practices appear to have a positive influence on preservice teachers' perceptions (Alnahdi et al., 2019; Mejia-Cardenas et al., 2022). These findings, although promising, should be seen as indicative rather than conclusive, given variations in study design and sample characteristics. Moreover, the literature notes that preservice teachers display varying levels of understanding and sophistication in their conceptualisations of inclusion, which can lead to different approaches in perceiving and addressing inclusive practices (Krischler et al., 2019). Training in inclusive settings appears to bolster both confidence and competence among preservice teachers, positively affecting their attitudes and perceptions regarding the effectiveness of teacher education programs (Civitillo et al., 2016). Nonetheless, these positive outcomes are tempered by reports of significant barriers such as limited time allocated for student engagement, insufficient practical experience, and inadequate school support, which may negatively influence their overall perceptions (Chhetri et al., 2023; Robinson, 2017). Limited exposure to and knowledge of inclusive education may leave preservice teachers feeling unprepared to effectively support diverse learners in the classroom (Robinson, 2017).

Some studies have suggested that programs specifically focusing on teaching students with additional learning needs can improve preservice teachers' attitudes and emotional responses toward inclusion (Beacham & Rouse, 2012; Stefanidis & Strogilos, 2015). Although these results are encouraging, they should be interpreted in light of the specific contexts and designs of the training programs involved. Additionally, evidence indicates that multiple, intensive field experiences, when combined with structured support, can enhance preservice teachers' perceptions and attitudes toward inclusion (Almalky & Alwahbi, 2023). When theoretical coursework is integrated with practical

Table 1. Influences on Preservice Teachers' Perceptions of Inclusive Education

Main factors	Main results	Supporting citations
Attitudes toward inclusion	Preservice teachers generally have positive attitudes toward inclusion, which significantly shape their perceptions of inclusive education.	AlMahdi & Bukamal, 2019; McHatton & Parker, 2013; Rodriguez, 2021; Takala & Sirkko, 2022; Yada et al., 2018
Experiences in inclusive settings	Direct teaching experiences and observations in inclusive classrooms enhance preservice teachers' perceptions, increasing their confidence and competence in inclusive practices.	Almalky & Alwahbi, 2023; Alnahdi et al., 2019; Dignath et al., 2022; Mejia-Cardenas et al., 2022; Wray et al., 2022
Training and competence	Training in special education and inclusive practices positively influences preservice teachers' knowledge, confidence, and attitudes toward inclusion.	Beacham & Rouse, 2012; Civitillo et al., 2016; Robinson, 2017; Stefanidis & Strogilos, 2015
Variability and barriers	There is variability in preservice teachers' understanding of inclusion concepts, and barriers such as limited time, lack of experience, and insufficient support hinder their ability to effectively implement inclusive education.	Chhetri et al., 2023; Kruschler et al., 2019
Attitudes toward specific groups	Some preservice teachers exhibit negative attitudes toward specific groups of students with additional learning needs, impacting their perceptions of inclusive education.	Golmic & Hansen, 2012; Sharma et al., 2006
Impact of inclusion programs	Inclusion programs offering theoretical frameworks and classroom practice result in positive shifts in preservice teachers' attitudes toward inclusion.	Bills & Mills, 2020; Gill et al., 2009; Ostrowdun, 2020
Integration of theory and practice	The combination of theoretical coursework with practical experiences and reflective exercises helps improve preservice teachers' beliefs and attitudes toward inclusion.	Gill et al., 2009; Varcoe & Boyle, 2014
Observations and modelling	Preservice teachers' perceptions are shaped by observing successful inclusive practices and by modelling positive attitudes toward students with disability, influencing their beliefs about inclusion.	Avramidis et al., 2000; Sharma & Sokal, 2015

experiences and reflective practices, there appears to be a facilitation of belief change and development of supportive frameworks for inclusive education (Gill et al., 2009). Opportunities to observe and engage with effective inclusive practices, along with the modelling of positive attitudes toward students with disability, are also associated with more favourable beliefs regarding inclusion (Avramidis et al., 2000). Overall, the synthesis of these findings suggests that preservice teachers' perceptions of inclusive education are influenced by a complex interplay of attitudes, direct experiences, and specialised training. It is essential to emphasise that these conclusions are derived from a diverse body of research with varying methodologies and sample contexts, and therefore definitive causal relationships should not be presumed. Table 1 presents a summary of the key factors reported in the literature and illustrates the multifaceted influences on preservice teachers' perceptions of inclusive education.

To further clarify the factors influencing preservice teachers' perceptions, the main themes have been organised into three overarching categories: attitudes, experiences, and training (see Figure 2). This categorisation not only facilitates a deeper understanding of the data but also highlights the interconnected nature of these factors in shaping preservice teachers' beliefs about inclusive education.

Attitudes

Preservice teachers generally exhibit positive attitudes toward inclusive education, shaping their beliefs about its effectiveness (Takala & Sirkko, 2022; Yada et al., 2018). Favourable views often predict a

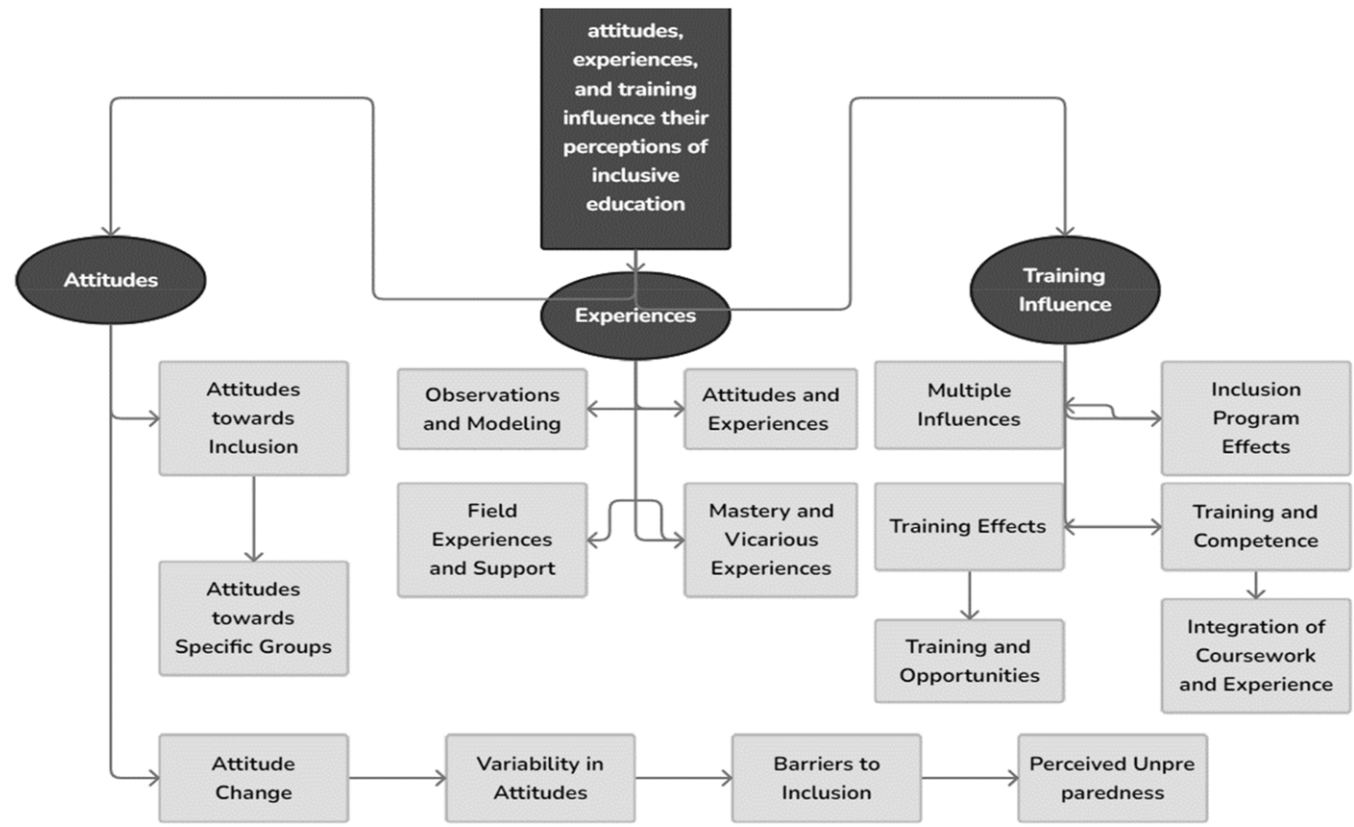


Figure 2. Themes Categorised Into Three Primary Groups — Attitudes, Experiences, and Training — Which Shape Preservice Teachers’ Perceptions of Inclusive Education.

willingness to implement inclusive practices (Rodriguez, 2021). However, attitudes toward specific groups, such as students with behavioural or intellectual disability, vary, with some studies reporting negative perceptions (Golmic & Hansen, 2012; Sharma et al., 2006). These attitudes stem from limited exposure and highlight the need for targeted interventions. Additionally, variability in preservice teachers' conceptualisations of inclusion underscores the necessity of comprehensive training (Krischler et al., 2019).

Experiences

Direct experiences in inclusive classrooms significantly shape preservice teachers' perceptions. Observing and teaching in these settings fosters confidence, reduces apprehension, and strengthens inclusive beliefs (Dignath et al., 2022; Mejia-Cardenas et al., 2022). Such experiences connect theoretical knowledge with practical application, reinforcing inclusive strategies (Gill et al., 2009). Observing successful inclusive practices and mentorship further enhances positive attitudes (Almalky & Alwahbi, 2023; Avramidis et al., 2000). However, limited exposure to inclusive classrooms remains a barrier, contributing to perceived unpreparedness in managing diverse learners (Robinson, 2017). Expanding structured field experiences and integrating reflective practices can address this gap.

Training

Training programs play a crucial role in enhancing preservice teachers' confidence and competence in inclusive education. Programs that integrate theoretical frameworks with classroom observations and discussions positively influence attitudes and perceptions (Bills & Mills, 2020; Ostrowdun, 2020). Coursework on differentiation, collaboration, and individualised instruction effectively prepares teachers for diverse classrooms (McHatton & Parker, 2013). Specialised training in special education reduces biases and builds self-efficacy (Stefanidis & Strogilos, 2015). However, barriers such as limited training time, insufficient school support, and inconsistent program quality persist (Chhetri et al., 2023). Addressing these challenges requires systemic reforms to ensure all teacher training programs prioritise inclusive education.

Factors in Inclusive Teacher Education That Shape Preservice Perceptions

The findings from this review indicate that teacher education programs play a significant role in influencing preservice teachers' perceptions of inclusive education. Research suggests that through these programs, preservice teachers develop the foundational knowledge and skills necessary for implementing inclusive practices (Sharma et al., 2008, 2019). Multiple studies have reported positive changes in attitudes and beliefs following participation in inclusive education modules, but the extent of these changes appears to vary based on factors such as program structure, prior exposure to students with disability, and the quality of field experiences (Almalky & Alwahbi, 2023; Varcoe & Boyle, 2014).

Some studies suggest that incorporating coursework on special education, alongside structured field experiences, may foster more favourable perceptions of inclusion (Ahsan & Sharma, 2018; Alnahdi et al., 2019). However, the impact of specialised training is not uniform across all contexts. For instance, while Ahsan and Sharma (2018) found that preservice teachers who received focused training in special education demonstrated greater confidence in inclusive settings, other studies indicate that such confidence may be influenced by additional variables, such as the presence of experienced mentors or the duration of practical training (Civitillo et al., 2016). This variability highlights the complexity of factors that shape preservice teachers' attitudes and underscores the need for further investigation into the conditions that maximise the effectiveness of these programs.

Practicum placements and field experiences have also been widely acknowledged as critical components in shaping preservice teachers' perceptions of inclusive education. Several studies suggest that direct interaction with children with disability can enhance understanding and foster confidence in

Table 2. Factors Affecting Perceptions and Attitudes to Inclusive Education

Factors	Main results	Authors and years
Teacher training programs	Teacher training programs significantly influence preservice teachers' attitudes and beliefs toward inclusion, thereby shaping their insights.	Sharma et al., 2008
Modules on inclusive education	Modules focusing on inclusive education within teacher education programs have a positive impact on preservice teachers' attitudes and beliefs, enhancing their understanding and support for inclusion.	Varcoe & Boyle, 2014
Training in special education	Specialised training in special education significantly shapes preservice teachers' attitudes toward inclusive education, thereby influencing their perceptions.	Ahsan & Sharma, 2018; Civitillo et al., 2016
Courses on special education and field experiences	Inclusion of courses on special education and field experiences positively influence preservice teachers' perceptions of inclusion, equipping them with essential knowledge and skills.	Alnahdi et al., 2019
Practicum placements	Practical experiences, such as engaging with and teaching students with diverse learning needs during practicum, enhance preservice teachers' understanding and confidence in inclusive education, thereby positively shaping their perceptions.	Sharma & Sokal, 2015

implementing inclusive practices (Kurniawati et al., 2017; Sharma & Sokal, 2015). However, although these studies report positive correlations between practical experiences and inclusive attitudes, the nature of these experiences varies across programs and contexts. For example, structured placements with guided reflection and mentoring appear to be more effective in promoting inclusive mindsets than observational placements alone (Schwab et al., 2017). These findings align with Kolb's (1984) experiential learning theory, which posits that learning through direct experience and reflection leads to deeper conceptual understanding. However, not all studies support a direct causal link between practicum experiences and positive shifts in perceptions. Some research indicates that preservice teachers who enter their training with pre-existing biases may not experience the same level of attitudinal change (Robinson, 2017), suggesting that individual dispositions and prior experiences also play a role.

The importance of theoretical grounding within teacher education programs is further underscored by social learning theory (Bandura, 1977), which posits that preservice teachers' attitudes and behaviours are shaped through observation and modelled experiences. Studies examining the effectiveness of specialised training in inclusive practices have generally supported this theory, suggesting that positive shifts in attitudes often occur when preservice teachers are exposed to successful examples of inclusive teaching (Ahsan & Sharma, 2018; Civitillo et al., 2016). However, the degree to which these shifts are sustained over time remains an area requiring further exploration, as some longitudinal studies indicate that positive perceptions can decline when preservice teachers enter real-world classroom environments with insufficient institutional support (Saloviita, 2015).

The literature reviewed strongly suggests that teacher education programs contribute to shaping perceptions of inclusive education, but it is important to acknowledge that findings are not universally consistent. The effectiveness of inclusive education training appears to be influenced by contextual factors such as program duration, the integration of theoretical and practical components, and the diversity of classroom experiences provided during training. For example, teacher education programs in Australia and New Zealand have emphasised culturally responsive pedagogy and structured practicum placements, which have been associated with greater preservice teacher confidence in inclusive teaching (East, 2014; Fletcher et al., 2021). These findings suggest that local educational policies and program structures may shape preservice teachers' perceptions in ways that are not entirely generalisable across different educational systems. Table 2 presents a summary of the key

factors reported in the literature and illustrates the multifaceted influences on preservice teachers' perceptions of inclusive education.

Measurements for Assessing Teacher Self-Efficacy in Inclusive Education

The reviewed literature indicates that the assessment of teacher self-efficacy in implementing inclusive education has predominantly relied on three measurement scales: the Teacher Efficacy for Inclusive Practices (TEIP; Park et al., 2016), the Teacher Sense of Efficacy Scale (TSES; Tschannen-Moran & Woolfolk Hoy, 2001), and the Teacher Inclusive Education Self-Efficacy Scale (TIESES; Schwab et al., 2017). These instruments were originally developed to capture various dimensions of teacher self-efficacy in inclusive settings and have been applied in numerous studies across diverse educational environments (Dignath et al., 2022; Romero-Contreras et al., 2013; Yada & Savolainen, 2019).

Several studies report that these scales demonstrate acceptable levels of internal consistency, which suggests that the items within the instruments reliably measure aspects of self-efficacy in inclusive practices. However, concerns have been raised regarding the comprehensiveness of these scales. Specifically, some authors have argued that these instruments tend to focus narrowly on the management of students with additional learning needs rather than capturing a broader perspective on inclusive education that encompasses the diverse needs of all learners (Romero-Contreras et al., 2013; Schwab et al., 2017).

Furthermore, although evidence of construct validity is provided by correlations between self-efficacy scores and related factors such as motivation, experience, and observed teaching behaviours, the consistency of these findings varies across different cultural and educational contexts. For instance, Schwab et al. (2017) have noted that the test–retest reliability of these instruments remains underexplored, which limits our understanding of the stability of these measures over time. This limitation is significant because without establishing the stability of the scores, it is challenging to ascertain whether the instruments accurately reflect changes in teacher self-efficacy following specific interventions.

In addition to concerns regarding internal consistency and test–retest reliability, the validation processes for these scales have not been uniformly rigorous. A key issue highlighted by Schwab et al. (2017) is the limited exploration of criterion validity — that is, the extent to which self-efficacy scores derived from these scales can predict actual teaching behaviours and performance in inclusive classrooms. This is an important consideration because if the scales do not adequately predict practical outcomes, their utility in informing teacher education initiatives may be compromised. Moreover, the psychometric properties of these instruments, including their factor structure and cross-cultural applicability (with particular reference to adaptations such as the German version of TIESES, as reported by Emam & Mohamed, 2011), require further exploration to ensure robustness across different educational settings.

Variability in the use and reported effectiveness of these scales across different regions and research contexts further complicates the generalisability of the findings. Differences in application procedures and outcomes associated with these tools suggest that although they offer valuable insights into teacher self-efficacy, cultural and contextual factors may influence their performance. For example, variations in the extent to which the scales account for local educational practices and cultural norms may affect their overall validity and reliability. This variability underscores the necessity for future research to refine these instruments, improve their content and criterion validity, and establish stronger test–retest reliability to ensure that they comprehensively capture the multifaceted nature of teacher self-efficacy in inclusive education.

Discussion

Our study's findings emphasise the critical role of comprehensive teacher education initiatives in shaping preservice teachers' attitudes, experiences, and self-efficacy regarding inclusive education. The

main findings reveal that although positive attitudes are prevalent among preservice teachers, these attitudes alone are insufficient for effective inclusive practice. Instead, a combination of theoretical training, structured practical experiences, and reflective practice is essential to develop the necessary competence and confidence. This discussion synthesises these findings and compares them with the broader literature, highlighting both convergences and divergences that may be attributed to differences in sample populations, program structures, and theoretical frameworks.

Our review reveals that positive attitudes toward inclusive education are fundamental in shaping preservice teachers' beliefs about its effectiveness (Takala & Sirkko, 2022; Yada et al., 2018). Many studies have shown that teachers who hold favourable views are more likely to adopt inclusive practices (Rodriguez, 2021). However, our findings also highlight that attitudes are not uniform. For instance, some studies report negative perceptions of students with specific needs, such as those with behavioural or intellectual disability (Golmic & Hansen, 2012; Sharma et al., 2006). These differences may be partly attributed to the extent of exposure preservice teachers have had to diverse learners. Although our review includes references to special education training and hands-on practicum experiences, these components are integral to a broader strategy for inclusive education. Our focus is on equipping preservice teachers with the skills and knowledge required to create inclusive classrooms that support a diverse range of learners, thereby extending beyond the inclusion of students with disability alone. Research conducted in Australia, for example, indicates that teacher preparation programs incorporating extensive exposure to diverse classrooms yield more consistently positive attitudes (Varcoe & Boyle, 2014). In contrast, studies with smaller or more homogenous sample sizes often reveal mixed or less positive attitudes, suggesting that limited exposure may foster uncertainty or bias. The variability in attitudes also underscores the importance of integrating targeted interventions within teacher preparation programs to address specific misconceptions and enhance the overall conceptualisation of inclusion (Krischler et al., 2019).

Direct hands-on experiences in inclusive classrooms are crucial for bridging the gap between theory and practice. Our findings consistently show that field experiences not only build confidence but also enhance preservice teachers' practical understanding of inclusive strategies (Gill et al., 2009). For instance, Civitillo et al. (2016) compared preservice teachers in Japan and Finland and found that although theoretical instruction was beneficial in fostering positive attitudes, it was the real-world classroom exposure that critically developed the skills necessary for effective inclusive teaching. Similarly, Schwab et al. (2017) reported that preservice teachers exposed to a diverse range of classroom environments exhibited higher self-efficacy and a stronger commitment to inclusive practices. In New Zealand, teacher education programs have similarly emphasised extensive practicum placements, which have been linked to improved teacher confidence and readiness for inclusion (Fletcher et al., 2021). However, a recurring issue is the variability in the quality and duration of these field experiences. Studies such as Robinson (2017) highlight that insufficient exposure or poorly structured placements can leave preservice teachers feeling unprepared to manage diverse learners. This mixed alignment among studies, where robust, well-structured field experiences yield positive outcomes while limited or unstructured experiences do not, suggests that the quantity and quality of experiential learning are critical determinants of success.

Training programs designed to address inclusion play an instrumental role in enhancing preservice teachers' self-efficacy. Our review indicates that programs integrating both theoretical instruction and practical application have the strongest impact on teacher preparedness (Bills & Mills, 2020; Ostrowdun, 2020). For example, training modules that include coursework on differentiation, collaboration, and individualised instruction have been shown to prepare teachers more effectively for the challenges of diverse classrooms (McHatton & Parker, 2013). Specialised training in special education further reduces biases and bolsters confidence, aligning with Bandura's social learning theory, which emphasises the importance of modelling and observational learning (Stefanidis & Strogilos, 2015). Australian teacher education programs often adopt a blended approach, combining classroom-based theory with extensive field placements, a model that has resulted in notable improvements in teacher self-efficacy (Ma et al., 2022). Similarly, New Zealand programs that

emphasise reflective practice alongside direct teaching experiences report enhanced competencies among preservice teachers (East, 2014). Yet challenges remain: limited training time, insufficient school support, and variability in program quality are persistent barriers (Chhetri et al., 2023). These factors not only impact teacher self-efficacy but also highlight the need for systemic reforms that ensure consistent, high-quality training across diverse educational contexts.

In synthesising these findings, it is clear that a holistic approach is necessary for effective teacher preparation for inclusive education. Positive attitudes are essential, but they must be complemented by structured, practical experiences and comprehensive training modules. The mixed outcomes across different studies can be explained by variations in sample sizes, cultural contexts, and the specific design of teacher education programs. For example, larger-scale studies in Australia and New Zealand provide robust evidence that integrated training models produce better prepared teachers, whereas studies with smaller or less diverse samples tend to report more variable results.

Implications

The findings of this systematic review highlight the pivotal role of comprehensive teacher education programs in enhancing preservice teachers' self-efficacy and preparedness for inclusive education. Our results indicate that robust curricula integrating both theoretical knowledge and practical experiences are essential. To this end, teacher education programs must incorporate dedicated modules on inclusive education, emphasising strategies such as differentiation, individualised instruction, and collaborative teaching. These modules should be complemented by well-structured field placements that offer authentic experiences in diverse classroom settings, thereby enabling preservice teachers to effectively translate theory into practice. Evaluative tools like the TEIP, TSES, and TIESES are critical for monitoring and enhancing program effectiveness. Routine assessments using these instruments can help identify curricular strengths and pinpoint areas requiring improvement, ensuring that training initiatives consistently bolster teacher self-efficacy.

In the Australasian context, where classrooms are increasingly multicultural, specific improvements in teacher education are warranted. For instance, successful Australian programs have forged strong partnerships with local schools to facilitate extended high-quality practicum experiences, while New Zealand initiatives that embed culturally responsive pedagogy have significantly improved teachers' abilities to manage diverse classrooms (East, 2014; Fletcher et al., 2021; Morrison & Gleddie, 2021). Adopting and adapting these models more widely could address the unique challenges faced by preservice teachers in this region. Moreover, establishing formal mentorship programs and collaborative professional development networks is essential. Regular workshops, inter-school exchanges, and reflective practice sessions can foster a supportive community among educators, ensuring that best practices in inclusive education are disseminated and refined continuously. Policy-level interventions should also be pursued to overcome systemic barriers such as limited training time and insufficient institutional support. Mandating minimum standards for inclusive education within teacher preparation programs could drive consistency and elevate overall training quality (see Figure 3). Collectively, these implications not only underscore the need for a holistic approach to teacher education but also advocate for systemic reforms that ensure preservice teachers are fully equipped to foster inclusive, equitable learning environments for all students.

Conclusions

The insights gained from this study are relevant to preservice teachers in general, across all educational levels and specialisations. By highlighting the need for inclusive education training, the study contributes to a broader understanding that transcends specific subject areas, thus supporting teacher education programs in fostering inclusive practices for all future educators. The findings from this review highlight the importance of various instruments for assessing teacher self-efficacy in the implementation of inclusive education. They underscore the necessity of validated tools to gain a

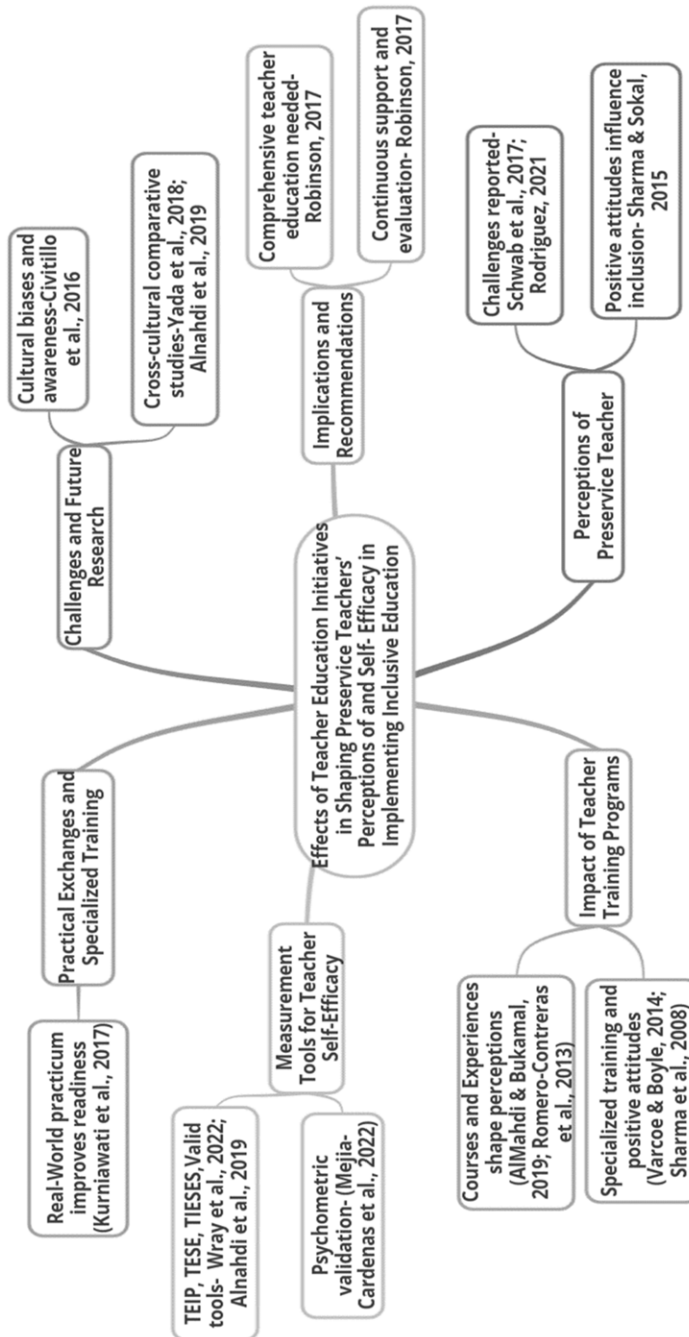


Figure 3. A Visual Representation of the Entire Study.

comprehensive understanding of this critical aspect of education. These insights are significant for educators, researchers, and policymakers, as they emphasise the potential impact on promoting inclusive and effective teaching methodologies. Additionally, the review offers guidance for policymakers to better support educators in delivering high-quality education to all students, informing the development of interventions and policies that ensure equitable educational opportunities (Alnahdi et al., 2019; Tanrıverdi, & Özokçu, 2018). Moreover, this systematic review provides valuable insights into the perceptions of preservice teachers regarding inclusive education. The comprehensive search strategy, adherence to PRISMA 2020 guidelines, and rigorous screening processes ensure the integrity of the final pool of studies. The results suggest that preservice teachers' perceptions, experiences, and training significantly shape their views on teacher education for inclusion. They identify challenges such as time constraints, limited resources, and insufficient support from schools as major obstacles. Addressing these issues within teacher education programs is crucial for facilitating effective inclusive education. Future research could advance this field by conducting longitudinal studies, performing comparative analyses, exploring additional influencing factors, and developing sophisticated evaluation tools (Kuok et al., 2022; Park et al., 2016). In the broader context of global education, it is essential to cultivate resilient and capable teachers with positive attitudes toward inclusive education. Preservice teachers require a comprehensive educational experience that includes coursework, field experiences, and mentorship to effectively implement inclusive practices. Moreover, teacher education programs should emphasise the importance of collaboration in fostering inclusive learning environments. Preservice teachers need training in effective teaching strategies, nurturing positive relationships with students and families, addressing biases, and creating inclusive settings. Policies must consider both students and teachers, ensuring secure and supportive learning environments tailored to community needs. Regular reviews and updates of these policies are necessary to adapt to changing circumstances and to provide teachers with ongoing professional training and support. Engaging parents in the policymaking process and establishing mechanisms to address disputes or complaints are also crucial (Alnahdi et al., 2019; Park et al., 2016).

Supplementary material. To view supplementary material for this article, please visit <https://doi.org/10.1017/jsi.2025.10006>

Data availability statement. The data that underpins the findings of this study is available from the following databases: ScienceDirect, Scopus, Taylor & Francis Online, and Wiley Online Library.

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References

- Ahsan, T., & Sharma, U. (2018). Pre-service teachers' attitudes towards inclusion of students with high support needs in regular classrooms in Bangladesh. *British Journal of Special Education*, 45(1), 81–97. <https://doi.org/10.1111/1467-8578.12211>
- Allday, R. A., Neilsen-Gatti, S., & Hudson, T. M. (2013). Preparation for inclusion in teacher education pre-service curricula. *Teacher Education and Special Education*, 36(4), 298–311. <https://doi.org/10.1177/0888406413497485>
- AlMahdi, O., & Bukamal, H. (2019). Pre-service teachers' attitudes toward inclusive education during their studies in Bahrain Teachers College. *SAGE Open*, 9(3). <https://doi.org/10.1177/2158244019865772>
- Almalky, H. A., & Alwahbi, A. A. (2023). Teachers' perceptions of their experience with inclusive education practices in Saudi Arabia. *Research in Developmental Disabilities*, 140, Article 104584. <https://doi.org/10.1016/j.ridd.2023.104584>
- Alnahdi, G. H., Saloviita, T., & Elhadi, A. (2019). Inclusive education in Saudi Arabia and Finland: Pre-service teachers' attitudes. *Support for Learning*, 34(1), 71–85. <https://doi.org/10.1111/1467-9604.12239>
- Auhl, G., & Bain, A. (2021). Do pre-service teachers develop a schema for inclusive classroom practice? *Asia-Pacific Journal of Teacher Education*, 49(4), 370–386. <https://doi.org/10.1080/1359866X.2020.1777530>
- Avissar, G. (2012). Inclusive education in Israel from a curriculum perspective: An exploratory study. *European Journal of Special Needs Education*, 27(1), 35–49. <https://doi.org/10.1080/08856257.2011.613602>
- Avramidis, E., Bayliss, P., & Burden, R. (2000). Student teachers' attitudes towards the inclusion of children with special educational needs in the ordinary school. *Teaching and Teacher Education*, 16(3), 277–293. [https://doi.org/10.1016/S0742-051X\(99\)00062-1](https://doi.org/10.1016/S0742-051X(99)00062-1)
- Bandura, A. (1977). *Social learning theory*. Prentice Hall.

- Beacham, N., & Rouse, M. (2012). Student teachers' attitudes and beliefs about inclusion and inclusive practice. *Journal of Research in Special Educational Needs*, 12(1), 3–11. <https://doi.org/10.1111/j.1471-3802.2010.01194.x>
- Bills, K. L., & Mills, B. (2020). Teachers' perceptions towards inclusive education programs for children with Down syndrome. *Journal of Research in Special Educational Needs*, 20(4), 343–347. <https://doi.org/10.1111/1471-3802.12494>
- Boyle, C., Barrell, C., Allen, K.-A., & She, L. (2023). Primary and secondary pre-service teachers' attitudes towards inclusive education. *Heliyon*, 9(11), Article e22328. <https://doi.org/10.1016/j.heliyon.2023.e22328>
- Chhetri, K., Spina, N., & Carrington, S. (2023). Teacher education for inclusive education in Bhutan: Perspectives of pre-service and beginning teachers. *International Journal of Inclusive Education*, 27(3), 303–318. <https://doi.org/10.1080/13603116.2020.1841840>
- Civitillo, S., De Moor, J. M. H., & Vervloed, M. P. J. (2016). Pre-service teachers' beliefs about inclusive education in the Netherlands: An exploratory study. *Support for Learning*, 31(2), 104–121. <https://doi.org/10.1111/1467-9604.12119>
- 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. <https://doi.org/10.1007/s10648-022-09695-0>
- East, M. (2014). Mediating pedagogical innovation via reflective practice: A comparison of pre-service and in-service teachers' experiences. *Reflective Practice*, 15(5), 686–699. <https://doi.org/10.1080/14623943.2014.944128>
- Emam, M. M., & Mohamed, A. H. H. (2011). Preschool and primary school teachers' attitudes towards inclusive education in Egypt: The role of experience and self-efficacy. *Procedia - Social and Behavioral Sciences*, 29, 976–985. <https://doi.org/10.1016/j.sbspro.2011.11.331>
- Fletcher, J., Astall, C., & Everatt, J. (2021). Initial teacher education students' perceptions during a practicum in primary schools: A New Zealand experience. *International Journal of Mentoring and Coaching in Education*, 10(3), 298–316. <https://doi.org/10.1108/IJMCE-10-2020-0069>
- Gill, P., Sherman, R., & Sherman, C. (2009). The impact of initial field experience on pre-service teachers' attitude toward inclusion. *Journal of Teacher Education for Sustainability*, 11(2), 3–13. <https://doi.org/10.2478/v10099-009-0036-z>
- Golmic, B. A., & Hansen, M. A. (2012). Attitudes, sentiments, and concerns of pre-service teachers after their included experience. *International Journal of Special Education*, 27(1), 27–36.
- Hassanein, E. E. A., Alshaboul, Y. M., & Ibrahim, S. (2021). The impact of teacher preparation on preservice teachers' attitudes toward inclusive education in Qatar. *Heliyon*, 7(9), Article e07925. <https://doi.org/10.1016/j.heliyon.2021.e07925>
- Kolb, D. A. (1984). *Experiential learning: Experience as the source of learning and development*. Prentice Hall.
- Koliki, D., Koliki, K., & Zabeli, N. (2023). Pre-service teachers' attitudes and the factors influencing their formation regarding inclusive education in Kosovo. *British Journal of Special Education*, 50(3), 379–393. <https://doi.org/10.1111/1467-8578.12463>
- Krischler, M., Powell, J. J. W., & Pit-Ten Cate, I. M. (2019). What is meant by inclusion? On the effects of different definitions on attitudes toward inclusive education. *European Journal of Special Needs Education*, 34(5), 632–648. <https://doi.org/10.1080/08856257.2019.1580837>
- Kuok, A. C. H., Teixeira, V., Forlin, C., Monteiro, E., & Correia, A. (2022). The effect of self-efficacy and role understanding on teachers' emotional exhaustion and work engagement in inclusive education in Macao (SAR). *International Journal of Disability, Development and Education*, 69(5), 1736–1754. <https://doi.org/10.1080/1034912X.2020.1808949>
- Kurniawati, F., de Boer, A. A., Minnaert, A. E. M. G., & Mangunsong, F. (2017). Evaluating the effect of a teacher training programme on the primary teachers' attitudes, knowledge and teaching strategies regarding special educational needs. *Educational Psychology*, 37(3), 287–297. <https://doi.org/10.1080/01443410.2016.1176125>
- Ma, K., McMaugh, A., & Cavanagh, M. (2022). Changes in pre-service teacher self-efficacy for teaching in relation to professional experience placements. *Australian Journal of Education*, 66(1), 57–72. <https://doi.org/10.1177/000494412111060474>
- Malinen, O.-P., Savolainen, H., & Xu, J. (2012). Beijing in-service teachers' self-efficacy and attitudes towards inclusive education. *Teaching and Teacher Education*, 28(4), 526–534. <https://doi.org/10.1016/j.tate.2011.12.004>
- Massé, L., Nadeau, M.-F., Gaudreau, N., Nadeau, S., Gauthier, C., & Lessard, A. (2022). Pre-service teachers' attitudes toward students with behavioral difficulties: Associations with individual and education program characteristics. *Frontiers in Education*, 7, Article 846223. <https://doi.org/10.3389/feduc.2022.846223>
- Massouti, A. (2021). Pre-service teachers' perspectives on their preparation for inclusive teaching: Implications for an organizational change in teacher education. *The Canadian Journal for the Scholarship of Teaching and Learning*, 12(1), Article 11. <https://doi.org/10.5206/cjsotlracea.2021.1.10611>
- McHatton, P. A., & Parker, A. (2013). Purposeful preparation: Longitudinally exploring inclusion attitudes of general and special education pre-service teachers. *Teacher Education and Special Education*, 36(3), 186–203. <https://doi.org/10.1177/0888406413491611>
- Mejia-Cardenas, C., Rivard, M., Mestari, Z., & Mello, C. (2022). Validation of the Multidimensional Attitudes Toward Preschool Inclusive Education Scale in the bilingual context of Québec. *Research in Developmental Disabilities*, 127, Article 104258. <https://doi.org/10.1016/j.ridd.2022.104258>

- Muhammad, A. E. (2020a). Critical thinking as a dimension of constructivist learning in social studies education: A study of teachers' attitudes in secondary education. *Journal of Studies in Education*, 10(2), 1–20. <https://doi.org/10.5296/jse.v10i2.16763>
- Muhammad, A. E. (2020b). The 21st century learning as a knowledge age: The effects on teacher's transforming teacher's knowledge in technology-rich environment in social studies education. *Journal of Critical Reviews*, 7(7), 286–294. <https://doi.org/10.31838/jcr.07.07.46>
- Muhammad, A. E. (2021). Social constructivist approach: Opinions of history teachers at intermediate secondary schools. *European Journal of Educational Research*, 10(3), 1423–1436. <https://doi.org/10.12973/eu-jer.10.3.1423>
- Muhammad, A. E. (2025). Validating the Teachers' Attitudes Towards Inclusive Education Scale: A psychometric study with pre-service teachers. *British Journal of Special Education*. Advance online publication. <https://doi.org/10.1111/1467-8578.70041>
- Muhammad, A. E., & Liu, Y. (2024, November 25–27). *Validation of the Teachers' Attitudes Towards Inclusive Education (TATIE) Scale among pre-service teachers in Iraqi Kurdistan* [Paper presentation]. 4th International Conference on Education & Teaching in K–12 Schools (ICET): Learning Opportunities For All, Iraqi Kurdistan. <https://icet.stirlingschools.co.uk/all-speakers/mr-ali-emad-2024/>
- Muhammad, A. E., & Liu, Y. (2025). Enhancing inclusivity in primary schools: The role of constructivist teacher education in addressing cultural diversity. *Education 3-13*. Advance online publication. <https://doi.org/10.1080/03004279.2025.2475969>
- Morrison, H. J., & Gleddie, D. (2021). Interpretive case studies of inclusive physical education: Shared experiences from diverse school settings. *International Journal of Inclusive Education*, 25(4), 445–465. <https://doi.org/10.1080/13603116.2018.1557751>
- Ostrowdun, C. P. (2020). Representations of inclusion: How pre-service teachers understand and apply inclusion across situations. *Exceptionality Education International*, 30(3), 102–123. <https://doi.org/10.5206/eei.v30i3.13509>
- Page, M. J., McKenzie, J. E., Bossuyt, P. M., Boutron, I., Hoffmann, T. C., Mulrow, C. D., Shamseer, L., Tetzlaff, J. M., Akl, E. A., Brennan, S. E., Chou, R., Glanville, J., Grimshaw, J. M., Hróbjartsson, A., Lalu, M. M., Li, T., Loder, E. W., Mayo-Wilson, E., McDonald, S., . . . Moher, D. (2021). The PRISMA 2020 statement: An updated guideline for reporting systematic reviews. *BMJ*, 372, Article 71. <https://doi.org/10.1136/bmj.n71>
- Park, M.-H., Dimitrov, D. M., Das, A., & Gichuru, M. (2016). The Teacher Efficacy for Inclusive Practices (TEIP) scale: Dimensionality and factor structure. *Journal of Research in Special Educational Needs*, 16(1), 2–12. <https://doi.org/10.1111/1471-3802.12047>
- 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. <https://doi.org/10.1016/j.tate.2016.09.007>
- Rodriguez, J. (2021). Perceptions and practices of U.S. pre-service special education teachers on teaching social studies instruction in inclusive classrooms. *International Journal of Inclusive Education*, 25(8), 928–943. <https://doi.org/10.1080/13603116.2019.1590472>
- Romero-Contreras, S., Garcia-Cedillo, I., Forlin, C., & Lomeli-Hernández, K. A. (2013). Preparing teachers for inclusion in Mexico: How effective is this process? *Journal of Education for Teaching*, 39(5), 509–522. <https://doi.org/10.1080/02607476.2013.836340>
- Saloviita, T. (2015). Measuring pre-service teachers' attitudes towards inclusive education: Psychometric properties of the TAIS scale. *Teaching and Teacher Education*, 52, 66–72. <https://doi.org/10.1016/j.tate.2015.09.003>
- Schwab, S., Hellmich, F., & Görel, G. (2017). Self-efficacy of prospective Austrian and German primary school teachers regarding the implementation of inclusive education. *Journal of Research in Special Educational Needs*, 17(3), 205–217. <https://doi.org/10.1111/1471-3802.12379>
- Sharma, U., Armstrong, A. C., Merumeru, L., Simi, J., & Yared, H. (2019). Addressing barriers to implementing inclusive education in the Pacific. *International Journal of Inclusive Education*, 23(1), 65–78. <https://doi.org/10.1080/13603116.2018.1514751>
- Sharma, U., Forlin, C., & Loreman, T. (2008). Impact of training on pre-service teachers' attitudes and concerns about inclusive education and sentiments about persons with disabilities. *Disability & Society*, 23(7), 773–785. <https://doi.org/10.1080/09687590802469271>
- Sharma, U., Forlin, C., Loreman, T., & Earle, C. (2006). Pre-service teachers' attitudes, concerns and sentiments about inclusive education: An international comparison of the novice pre-service teachers. *International Journal of Special Education*, 21(2), 80–93.
- Sharma, U., & Jacobs, D. K. (2016). Predicting in-service educators' intentions to teach in inclusive classrooms in India and Australia. *Teaching and Teacher Education*, 55, 13–23. <https://doi.org/10.1016/j.tate.2015.12.004>
- Sharma, U., & Sokal, L. (2015). The impact of a teacher education course on pre-service teachers' beliefs about inclusion: An international comparison. *Journal of Research in Special Educational Needs*, 15(4), 276–284. <https://doi.org/10.1111/1471-3802.12043>
- Sharma, U., Sokal, L., Wang, M., & Loreman, T. (2021). Measuring the use of inclusive practices among pre-service educators: A multi-national study. *Teaching and Teacher Education*, 107, Article 103506. <https://doi.org/10.1016/j.tate.2021.103506>

- Starczewska, A., Hodkinson, A., & Adams, G. (2012). Conceptions of inclusion and inclusive education: A critical examination of the perspectives and practices of teachers in Poland. *Journal of Research in Special Educational Needs*, 12(3), 162–169. <https://doi.org/10.1111/j.1471-3802.2011.01209.x>
- Stefanidis, A., & Strogilos, V. (2015). Union gives strength: Mainstream and special education teachers' responsibilities in inclusive co-taught classrooms. *Educational Studies*, 41(4), 393–413. <https://doi.org/10.1080/03055698.2015.1018872>
- Takala, M., & Sirkko, R. (2022). Pre-service teachers' attitudes towards inclusion in Finland. *Support for Learning*, 37(3), 377–398. <https://doi.org/10.1111/1467-9604.12415>
- Tanriverdi, A., & Özokçu, O. (2018). The psychometric properties of the Turkish version of the Teacher Efficacy for Inclusive Practices (TEIP) scale. *Educational Research and Reviews*, 13(18), 654–663. <https://doi.org/10.5897/err2018.3504>
- Temple, J. (2006). Conducting Research Literature Reviews: From the Internet to Paper, 2nd edn. *Journal of Advanced Nursing*, 55(6), 792. <https://doi.org/10.1111/j.1365-2648.2006.04033.x>
- Tschannen-Moran, M., & Woolfolk Hoy, A. (2001). Teacher efficacy: Capturing an elusive construct. *Teaching and Teacher Education*, 17(7), 783–805. [https://doi.org/10.1016/S0742-051X\(01\)00036-1](https://doi.org/10.1016/S0742-051X(01)00036-1)
- UNESCO. (1994). *The Salamanca statement and framework for action on special needs education*. Ministry of Education and Science. <https://unesdoc.unesco.org/ark:/48223/pf0000098427>
- UNESCO. (2000). *The Dakar framework for action: Education for all: Meeting our collective commitments (including six regional frameworks for action)*.
- UNESCO. (2020). *Towards inclusion in education: Status, trends and challenges: The UNESCO Salamanca Statement 25 years on*. UNESCO Digital Library. <https://unesdoc.unesco.org/ark:/48223/pf0000374246>
- UNICEF. (2017). *Inclusive education: Understanding Article 24 of the Convention on the Rights of Persons with Disabilities*. https://www.unicef.org/eca/sites/unicef.org.eca/files/IE_summary_accessible_220917_0.pdf
- United Nations. (2006). *Convention on the Rights of Persons with Disabilities*. https://treaties.un.org/doc/Publication/CTC/Ch_IV_15.pdf
- Varcoe, L., & Boyle, C. (2014). Pre-service primary teachers' attitudes towards inclusive education. *Educational Psychology*, 34(3), 323–337. <https://doi.org/10.1080/01443410.2013.785061>
- Woodcock, S., Sharma, U., Subban, P., & Hitches, E. (2022). Teacher self-efficacy and inclusive education practices: Rethinking teachers' engagement with inclusive practices. *Teaching and Teacher Education*, 117, Article 103802. <https://doi.org/10.1016/j.tate.2022.103802>
- Wray, E., Sharma, U., & Subban, P. (2022). Factors influencing teacher self-efficacy for inclusive education: A systematic literature review. *Teaching and Teacher Education*, 117, Article 103800. <https://doi.org/10.1016/j.tate.2022.103800>
- Yada, A., & Savolainen, H. (2019). Japanese and Finnish teachers' perceptions and self-efficacy in inclusive education. *Journal of Research in Special Educational Needs*, 19(S1), 60–72. <https://doi.org/10.1111/1471-3802.12478>
- Yada, A., Tolvanen, A., & Savolainen, H. (2018). Teachers' attitudes and self-efficacy on implementing inclusive education in Japan and Finland: A comparative study using multi-group structural equation modelling. *Teaching and Teacher Education*, 75, 343–355. <https://doi.org/10.1016/j.tate.2018.07.011>
- Ydo, Y. (2020). Inclusive education: Global priority, collective responsibility [Editorial]. *Prospects*, 49(3–4), 97–101. <https://doi.org/10.1007/s11125-020-09520-y>