IRJE |Indonesian Research Journal in Education|Vol. 10| No. 1|March|Year 2026|
This is an Open Access article, published by Universitas Jambi, Indonesia

Indonesian pre-service teachers' readiness for inclusive education: A perspective from a State Islamic University

RAHMAH FITHRIANI[1], MIRA WAHYUNI[2*], AND DADANG HARDIANSYAH[3]

Abstract

This study aims to evaluate the readiness of pre-service teachers at the Faculty of Tarbiyah and Teacher Training, State Islamic University of North Sumatra, for inclusive education. A mixed-methods approach utilizing an explanatory sequential design was employed to gain a thorough understanding of prospective teachers' knowledge, attitudes, self-efficacy, and concerns about inclusive education. The quantitative poll included 298 students across 10 academic disciplines, of whom 44 were voluntarily selected for the Focus Group Discussion (FGD) session. Quantitative data were collected using an expert-validated questionnaire and analyzed descriptively with SPSS 25.0, while qualitative data were evaluated thematically. The findings revealed that the prospective teachers had favorable attitudes and self-efficacy toward inclusive education; however, they needed to enhance their conceptual knowledge and receive institutional support to be adequately prepared for inclusive learning activities.

Keywords

Special educational need (SEN), teacher education, teacher self-efficacy, teaching concerns, teaching attitudes and intentions

Article History

Received 15 November 2025
Accepted 10 February 2026

How to Cite

Fithriani, R., Wahyuni, M., & Hardiansyah, D. (2026). Indonesian pre-service teachers' readiness for inclusive education: A perspective from a State Islamic University. *Indonesian Research Journal in Education |IRJE|*, *10*(1), 325-350. https://doi.org/10.22437/irje.v10i1.49926

[1]Universitas Islam Negeri Sumatera Utara, Indonesia,
[2*]Universitas Islam Negeri Sumatera Utara, Indonesia, Corresponding author: mirawahyuni@uinsu.ac.id
[3] Universitas Islam Negeri Sumatera Utara, Indonesia

This is an Open Access article, published by Universitas Jambi, Indonesia

Introduction

Education is a fundamental human right and a cornerstone of sustainable social and economic development; it must be accessible irrespective of gender, ethnicity, ability, culture, or religion (UNESCO, 1994). Inclusive education operationalizes this principle by meeting the diverse needs of learners in shared settings, advancing equality and social justice (Ainscow, 2020; Booth & Ainscow, 2002). Historically, people with disabilities have been excluded from mainstream schooling, facing systemic barriers that curtail participation and opportunity (Jardinez & Natividad, 2024; Reyes et al., 2017). The inclusion movement, therefore, signals moral, educational, and legal commitments to building systems that embrace diversity and equitable participation.

A major milestone in advancing inclusive education was the Salamanca Statement (UNESCO, 1994), which redefined schooling for learners with disabilities under the principle of "Education for All." The statement affirmed that all children, regardless of physical, intellectual, emotional, linguistic, or social conditions, should learn together in regular schools (Gariazzo, 2010; Sharma et al., 2015). While many countries—including Indonesia through Law No. 20/2003 and Ministerial Regulation No. 70/2009—have adopted these principles, implementation gaps persist in access, quality, and support systems (Kanter, 2019; Ramadhani & Fithriani, 2022).

Despite decades of advocacy, children with disabilities remain among the most excluded globally; an estimated 240 million still lack inclusive learning environments (UNESCO, 2020; Kanter, 2019; Sharma et al., 2008). In Indonesia, only a small proportion of students with disabilities are enrolled in the 40,928 registered inclusive schools, underscoring deficits in infrastructure, teacher competence, and institutional readiness (Imaniah & Fitria, 2018; Jacob & Pillay, 2022). Teacher readiness and competence are pivotal to effective inclusive education (Dignath et al., 2022; Kalyanpur, 2016). Evidence indicates that many teachers feel ill-prepared to support learners with special needs due to insufficient training and limited practical experience (Materechera, 2020; Woodcock et al., 2022). In Indonesia, for example. relatively few schools serving students with disabilities employ specialist teachers (Pov & Kawai, 2024). Teachers' attitudes and beliefs further condition classroom inclusion (Sharma et al., 2008), and inadequate preparation during teacher education can engender anxiety and resistance. Accordingly, scholars advocate embedding inclusive education principles into teacher preparation programs to strengthen candidates' knowledge, self-efficacy, and positive dispositions toward inclusion (Ahsan & Sharma, 2018; Sokal & Sharma, 2017).

Teacher education institutions are central to cultivating the pedagogical competence required for inclusion. Pre-service training shapes both teachers' self-efficacy and intentions to teach students with disabilities (AlMahdi & Bukamal, 2019; Arnaiz-Sánchez et al., 2019). Structured exposure to inclusive principles is associated with greater confidence and more favorable perceptions (Goddard & Evans, 2018; Sharma & Sokal, 2013), whereas limited preparation correlates with uncertainty and negative attitudes toward diversity (Hemmings & Woodcock, 2011; Winter, 2006). The pre-service period is thus formative for enduring dispositions toward inclusion that persist in professional practice (Jacob & Pillay, 2022; Sokal & Sharma, 2017).

Ajzen's Theory of Planned Behavior (TPB) (1991) offers a concise lens on readiness for inclusive practice, positing that attitudes, perceived behavioral control (self-efficacy), and subjective norms jointly shape intentions (Sharma & Jacobs, 2016). In education, positive

This is an Open Access article, published by Universitas Jambi, Indonesia

attitudes and strong self-efficacy predict uptake of inclusive pedagogies, whereas heightened concerns depress commitment (Avramidis et al., 2019; Forlin & Chambers, 2011; Sharma et al., 2006). Prior research confirms robust relationships among teachers' attitudes, efficacy, and concerns in shaping inclusive teaching (Sharma et al., 2006). Nevertheless, little empirical evidence exists on how these factors interact specifically among Indonesian pre-service teachers, representing a significant knowledge gap that this study addresses.

Grounded in this framework, the present study examines the readiness of pre-service teachers at the Faculty of Education, State Islamic University of North Sumatra, Indonesia, to teach in inclusive classrooms. It investigates their (a) knowledge of inclusive education, (b) attitudes and intentions, (c) self-efficacy, and (d) concerns. The study contributes conceptually by applying TPB to readiness for inclusion; methodologically by providing evidence from an under-researched Indonesian Islamic higher-education context; and pedagogically by informing curricula that integrate inclusive pedagogy, reflective practice, and experiential learning.

Literature Review

Global and national development of inclusive education

Inclusive education has become a central focus of contemporary educational discourse, underscoring the universal right of every individual to access equitable learning opportunities without discrimination (Ainscow, 2020). This paradigm reflects a fundamental shift from the integration model—where learners with special needs were merely accommodated—to a more holistic inclusion model that embeds these learners within the fabric of mainstream education (Arnaiz-Sánchez et al., 2019). In developed countries, the realization of inclusive education has been facilitated by coherent policy frameworks, continuous teacher training, and the systematic provision of adequate resources and adaptive infrastructure (Kalyanpur, 2016). Conversely, many developing nations, including Indonesia, encounter persistent structural and cultural challenges that hinder effective implementation (Anshari, 2023). Although various policies have been established, their translation into practical educational settings remains limited (Somad et al., 2024). This gap is largely attributed to shortages of professionally trained teachers, inadequate learning support facilities, and differing levels of societal awareness regarding the rights of children with special needs (Pov & Kawai, 2024).

In the Indonesian context, the issuance of Permendiknas No. 70 of 2009 represents a critical policy initiative for inclusive education. However, implementation across regions has been uneven, with numerous schools lacking teachers proficient in adaptive pedagogical practices (Somad et al., 2024). Despite policy advancements, implementation often remains administrative and symbolic, failing to produce substantive pedagogical reform. In practice, inclusion is frequently misinterpreted as the mere physical integration of students with special needs into regular classrooms, without corresponding curricular or methodological adjustments (Booth & Ainscow, 2002). This discrepancy between policy and practice underscores that the principle of inclusivity has yet to be fully internalized within school cultures. Teachers, therefore, serve as pivotal agents in narrowing this gap, as their understanding and embodiment of inclusive pedagogies determine the extent to which inclusive education can be effectively realized.

This is an Open Access article, published by Universitas Jambi, Indonesia

Teachers' professional competencies and efficacy in inclusive education

Teachers' professional competencies represent a pivotal determinant in the effective implementation of inclusive education. These competencies extend beyond pedagogical expertise and academic proficiency to encompass interpersonal sensitivity, empathy, and a deep appreciation of learner diversity (Woodcock et al., 2022). An inclusive educator is expected to design and adapt instructional methods that respond to the varied needs, abilities, and characteristics of all students (Nasution et al., 2024). However, in many educational contexts, teachers lack comprehensive training in differentiated instruction and universal design for learning, which diminishes their confidence when navigating the complexities of inclusive classrooms (Reyes et al., 2017). Moreover, limited hands-on experience managing diverse classrooms often constrains teachers' ability to cultivate a reflective, mindful approach to student diversity, resulting in less responsive learning environments.

Teachers' self-efficacy plays an essential role in shaping their willingness and capability to adopt inclusive practices. Teachers with high self-efficacy demonstrate greater openness to innovative teaching approaches, more confidence in addressing challenges, and a favorable attitude toward student diversity (Woodcock et al., 2022). Conversely, those with lower self-efficacy tend to experience anxiety and apprehension, perceiving inclusion as an additional professional burden rather than a pedagogical opportunity (Avramidis et al., 2019). Alongside efficacy, teachers' attitudes and concerns significantly influence their implementation of inclusive education. A positive disposition toward students with special needs promotes the adoption of adaptive teaching strategies. In contrast, excessive concerns—such as inadequate facilities, limited institutional support, or unclear policy direction—often hinder the process (Gariazzo, 2010). Evidence also indicates that social and organizational support within schools can strengthen teacher efficacy and alleviate concerns related to inclusive practice. Collaborative environments—where teachers share experiences, receive peer feedback, and obtain consistent administrative support—foster greater confidence and commitment toward inclusivity (Nasution et al., 2024).

In examining the implementation of inclusive education within the Indonesian context, it is essential to consider the dynamic interplay between teachers' efficacy, attitudes, and concerns, as these factors collectively determine readiness for inclusive practice (Goddard & Evans, 2018). Teachers with a strong sense of efficacy often perceive classroom diversity as an opportunity to enrich learning rather than a constraint on instructional effectiveness. Consequently, professional development initiatives must prioritize not only the enhancement of technical competencies but also the cultivation of reflective awareness, confidence, and adaptive capability (Kalyanpur, 2016). Comprehensive training programs that integrate experiential learning and sustained mentoring can substantially improve teachers' capacity to manage diverse classrooms (Goddard & Evans, 2018). Such initiatives also help mitigate emotional fatigue and contextual challenges, enabling teachers to engage inclusively and creatively with all learners. Ultimately, the success of inclusive education depends on teachers' ability to translate inclusive principles into authentic classroom practices—an endeavor that requires both systemic support and a personal commitment to equitable learning (Arnaiz-Sánchez et al., 2019).

This is an Open Access article, published by Universitas Jambi, Indonesia

Theoretical framework: Theory of planned behavior (attitude, concern, efficacy)

This study adopts the Theory of Planned Behavior (TPB), a framework developed by Ajzen (1991), which asserts that individual behavior is influenced by intention, which, in turn, is shaped by three key determinants: attitude toward the behavior, subjective norm, and perceived behavioral control. The TPB offers a useful lens for exploring how teachers' attitudes, concerns, and self-efficacy collectively shape their readiness to implement inclusive education practices. In the context of inclusive education, this framework provides insight into how psychological factors shape teachers' behavioral intentions to engage with inclusive learning strategies (Boyle et al., 2013). Teachers' attitudes toward inclusive education reflect their personal evaluations of the concept's value and the challenges it presents. A positive attitude is strongly associated with a higher likelihood of teachers engaging actively in inclusive practices (Ahsan & Sharma, 2018).

However, concern—an emotional response not explicitly addressed by the original TPB—plays a critical role in shaping teachers' actions. Research has shown that concern, particularly when teachers feel they lack competence or adequate institutional support, can act as a barrier to the adoption of inclusive education (Boyle et al., 2013). Teachers with heightened concerns are less likely to take proactive steps toward inclusivity. On the other hand, institutional support, including access to resources, professional development, and collaboration opportunities, can alleviate these concerns and enhance teachers' confidence in their ability to implement inclusive practices (Yan & Sin, 2013).

The third TPB component, efficacy, is closely linked to perceived behavioral control, which represents a teacher's belief in their capacity to manage classroom challenges and achieve desired outcomes. Teachers with a strong sense of self-efficacy are more likely to proactively engage with the obstacles they encounter in inclusive education. These educators tend to adjust their teaching strategies to meet the diverse needs of their students, ensuring that inclusive education becomes a functional reality in their classrooms (Avramidis et al., 2019).

Therefore, the Theory of Planned Behavior provides a comprehensive and dynamic framework for understanding the psychological factors influencing teachers' actions in inclusive education (Ajzen, 1991). By integrating the elements of attitude, concern, and efficacy, this theory facilitates a deeper exploration of the factors that shape teachers' readiness to adopt inclusive practices (Boyle et al., 2013). In particular, the application of TPB in the Indonesian context sheds light on why many teachers, despite generally supporting inclusive education, may still be reluctant to adopt these practices in their classrooms (Anshari, 2023). Furthermore, applying TPB enables the development of targeted teacher-training strategies that focus not only on technical skills but also on emotional readiness. By addressing teachers' concerns, bolstering their self-efficacy, and fostering a positive attitude toward inclusivity, these strategies can better prepare teachers to face the challenges of inclusive education. This approach highlights the importance of creating professional development programs that go beyond academic training, equipping teachers with the tools and support they need to navigate the practical and emotional aspects of inclusive education (Yan & Sin, 2013).

Synthesis and research gaps

An examination of the existing literature reveals that the discourse surrounding inclusive education in Indonesia remains primarily focused on policy development and technical

This is an Open Access article, published by Universitas Jambi, Indonesia

training aspects (Imaniah & Fitria, 2018; Pov & Kawai, 2024; Ramadhani & Fithriani, 2022). However, the psychological dimensions of educators—such as their attitudes, efficacy, and concerns—have received limited attention and are often examined in isolation, rather than within a cohesive framework grounded in a singular conceptual model (Ajzen, 1991). These psychological factors are critical in shaping teachers' readiness to engage with inclusive education, yet their influence remains underexplored in current research. While many studies emphasize the importance of teacher training (Goddard & Evans, 2018; Sharma et al., 2008), there is a noticeable gap in research on how such training influences shifts in teachers' attitudes and self-confidence, particularly in working with students with special needs.

Furthermore, existing research predominantly focuses on in-service teachers with prior experience in inclusive settings. There is a distinct lack of studies examining the perspectives of pre-service teachers, who are at a crucial stage in developing their professional attitudes and efficacy. This stage plays a significant role in shaping their future approach to inclusive education, making it a critical area for investigation. The limited body of research that attempts to integrate attitude, concern, and efficacy into a unified theoretical framework highlights a conceptual gap that warrants further exploration.

This study aims to address this gap by applying the Theory of Planned Behavior (TPB) as a framework to examine how the interplay of these three psychological factors influences teachers' preparedness for inclusive education. By incorporating attitudes, concerns, and efficacy within a single model, this research seeks to provide a more comprehensive understanding of the psychological dynamics that shape teachers' readiness to implement inclusive learning practices.

Methodology

This study employed a mixed-methods approach with an explanatory sequential design (Creswell, 2014), beginning with quantitative data collection, followed by qualitative data to provide a comprehensive understanding of prospective teachers' preparedness for inclusive education. Conducted at the Faculty of Tarbiyah and Teacher Training (FITK) of the State Islamic University of North Sumatra (UINSU), the research involved 1,084 sixth-semester students from 10 educational programs. Using stratified random sampling, one class from each program was selected, resulting in 298 participants (58 male, 240 female). To complement the quantitative data, Focus Group Discussions (FGDs) were conducted with 44 purposively selected participants, reflecting data variation and relevance to the survey findings. This qualitative phase aimed to deepen the understanding of teachers' experiences and perceptions of inclusive education.

The research instruments included questionnaires and guidelines for focus group discussions (FGD). The questionnaire, developed from prior studies (Lazano et al., 2023; Ruth et al., 2020; Sharma & Jacobs, 2016), assessed understanding, attitudes, self-efficacy, concerns, and demographics using a Likert scale. It was validated by two experts in inclusive education for content validity, then piloted with prospective biology teachers to assess clarity and reliability, using Cronbach's Alpha. Following validation, the instruments were administered to 298 respondents, with oversight to ensure procedural consistency. For the qualitative phase, FGD participants were purposively selected from the questionnaire data to ensure diversity of experiences. The FGDs were conducted in two sessions, each with 22 participants, facilitated by two inclusive education experts.

This is an Open Access article, published by Universitas Jambi, Indonesia

Descriptive statistics, including frequency, percentage, mean, and standard deviation, were employed to analyze quantitative data using SPSS software version 25.0. This analysis aims to assess prospective teachers' understanding, attitudes, self-efficacy, and concerns regarding inclusive education. Qualitative data were analyzed using thematic analysis, which comprised four stages: verbatim transcription of focus group discussion transcripts, coding, theme categorization, and interpretation of results in relation to quantitative data (Shneidman, 1988). The findings were synthesized to enhance the understanding of prospective teachers' preparedness for inclusive education. The research process complied with scientific ethics, ensuring voluntary participation, the confidentiality of respondents' identities, and limiting data access to research purposes only.

Findings

Knowledge of inclusive education

Assessing pre-service teachers' knowledge of inclusive education is a vital first step in understanding their readiness to teach in diverse classrooms. The Teacher Knowledge Test on Inclusive Education, administered to 298 participants, assessed both their conceptual understanding of inclusive education principles and their grasp of how these principles are applied in practice. The analysis revealed a varied outcome: while some areas demonstrated a strong foundational understanding, others highlighted persistent misconceptions and knowledge gaps. To complement these quantitative findings, insights from two focus group discussion (FGD) sessions provided additional contextual depth. Figure 1 displays the distribution of correct and incorrect responses across all 21 test items.

Figure 1. *Distribution of teacher knowledge test answers on inclusive education*

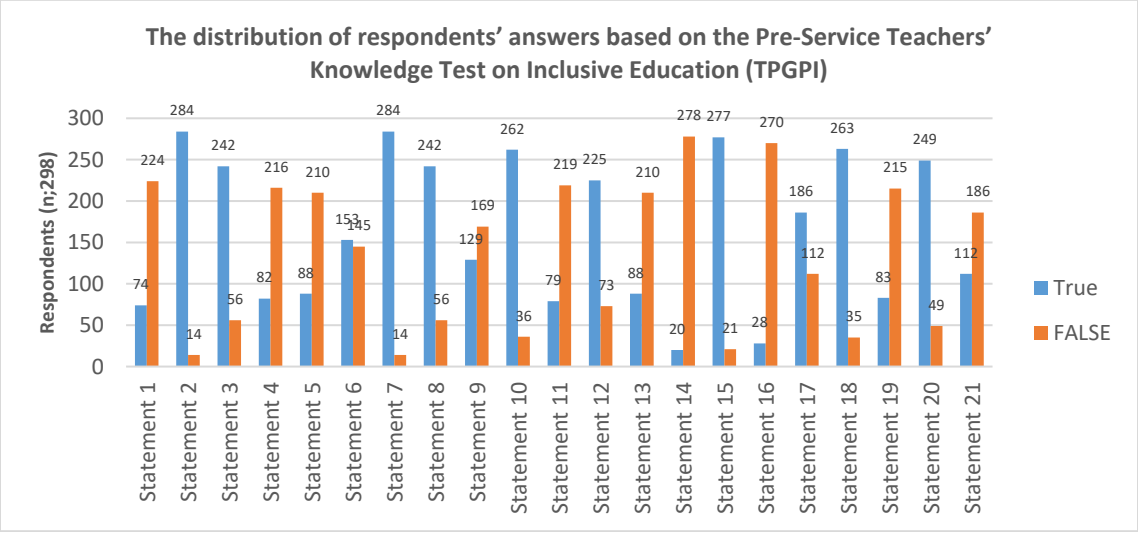

Figure 1 presents the distribution of correct and incorrect responses to the 21-item Teacher Knowledge Test on Inclusive Education (TPGPI) completed by 298 pre-service teachers. A clear strength emerged in items measuring the core ethical and philosophical foundations of inclusive education. Statement 2, recognizing that diversity enriches learning, and Statement

This is an Open Access article, published by Universitas Jambi, Indonesia

7, emphasizing the family's role in supporting children with special needs, both received 284 correct responses. Similarly, 262 respondents answered correctly on Statement 10, which links inclusion to combating discrimination and promoting social cohesion. Statement 15, stressing the importance of instructional modification to address barriers to learning, was also correctly answered by 277 participants. In the FGDs, participants often expressed similar values. One student stated:

> "Differences among students are a learning resource that fosters recognition and respect" (P1, Session 1)

While another added:

> "Seeing classmates with special needs motivates us to improve our teaching competence to serve everyone better" (P24, Session 2).

These comments show participants embrace the ethical foundation of inclusion, valuing diversity and family collaboration. They view differences as opportunities for growth and mutual learning, recognizing that effective inclusion requires partnerships beyond the classroom and that this forms a strong basis for future practical competence.

Despite this conceptual support, significant weaknesses were evident in understanding that inclusion extends beyond physical access to meaningful participation. Statement 1, which assessed recognition that inclusive settings must provide safety and engagement for students with special needs, was answered correctly by only 74 respondents. Similarly, Statement 4, which focuses on inclusion as active participation rather than mere placement, received just 82 correct responses. FGD participants helped explain these gaps. One participant reflected:

> "Inclusive education is not just about allowing students with disabilities into the classroom, but schools must also be ready to fully support them" (P7, Session 1).

Another noted:

> "In remote areas, teachers lack experience and facilities to make students feel fully engaged" (P23, Session 2).

These statements reveal that many candidates still equate inclusion with physical access, overlooking essential psychosocial and instructional dimensions. Without focusing on supportive environments, differentiated instruction, and meaningful participation, inclusion risks remain superficial and failing to effectively address the actual needs of diverse learners.

Equally concerning was the widespread misconception about diversity as a valuable learning resource. Statement 5 revealed that only 88 participants recognized its potential as a strength, while 210 viewed it as a challenge to teaching effectiveness. This misconception, frequently echoed in the FGDs, underscores persistent deficit-oriented thinking that limits teachers' appreciation of inclusive classrooms. One participant explained:

> "Sometimes teachers may focus too much on students with special needs, leaving others behind" (P4, Session 1).

This is an Open Access article, published by Universitas Jambi, Indonesia

Another added:

> "Students with disabilities often require more attention, which can reduce focus on the rest of the cla*ss"* (P35, Session 2).

These remarks highlight the importance of integrating experiential and case-based learning into teacher preparation. Such exposure shifts perceptions of diversity from a challenge to an asset, fostering empathy, practical skills, and a stronger commitment to inclusive practices that improve outcomes for all learners.

The most pronounced weaknesses appeared in applied knowledge related to assessment and intervention. Statement 14, on the diagnostic use of summative assessments to inform instructional planning, received the fewest correct responses, only 20 out of 298. Similarly, Statement 16, on using alternative delivery modes such as recorded materials for greater accessibility, was correctly answered by only 28 participants. Persistent misunderstandings were also found in Statement 11, regarding the principle that accommodations should not lower academic standards, and in Statement 13, about the need for sustained rather than reduced interventions for learners with special needs. These gaps were further illuminated by the FGD data. As one participant admitted:

> "I find it difficult because I lack experience and skills in handling inclusive classrooms" (P12, Session 1).

Another observed:

> "Understanding and responding to different students' needs requires a great deal of patience and practice" (P32, Session 2).

These insights highlight the need to embed structured field-based experiences in teacher preparation programs. Although participants valued inclusion, many lacked confidence due to limited real-world exposure. Guided practicums, classroom observations, and mentorship can build essential skills, bridge theory and practice, foster self-efficacy, and enable future teachers to confidently implement inclusive principles.

Some items reflected intermediate or transitional levels of understanding. Statement 6 revealed a nearly even split between correct (153) and incorrect (145) responses, indicating uncertainty about whether inclusion alone can effectively reduce discriminatory attitudes. This ambivalence was echoed in the FGDs, where some participants felt that inclusive policies had limited impact without simultaneous efforts to change school culture. As one participant remarked:

> "Inclusive programs sometimes exist only in policy, but discrimination continues because of entrenched attitudes in schools" (P14, Session 1).

In contrast, more positive patterns appeared in Statement 8, with 242 correct responses recognizing inclusion as a catalyst for helping learners reach their full potential. This view was reinforced by a participant who noted:

This is an Open Access article, published by Universitas Jambi, Indonesia

> "Through daily interaction, students learn empathy and cooperation that help them grow together" (P7, Session 1)

While another added:

> "Inclusive classrooms give all children equal opportunities to develop their strengths" (P25, Session 2).

Similarly, Statement 12, with 225 correct responses, highlighted participants' recognition of the importance of hands-on learning for students with difficulties. Awareness of the need to balance individual and collaborative work was also high in statements 18 (263 correct responses) and 20 (249 correct responses), indicating an appreciation of both differentiated opportunities and students' unique strengths. Nevertheless, continued misconceptions were evident in Statement 19, with only 83 correct answers acknowledging environmental rather than inherent barriers, and in Statement 21, with just 112 correct responses recognizing that systems, not students, must adapt. These findings, reinforced by FGD insights, reveal that although many pre-service teachers are beginning to grasp key inclusive concepts, their understanding remains fragmented, underscoring the need for more experiential, practice-oriented preparation.

Integrating these findings reveals a consistent pattern: pre-service teachers in this study strongly support the moral vision and collaborative ethos of inclusive education but face notable challenges in translating these ideals into effective classroom practices. Insights from the FGD sessions highlight that limited exposure to authentic, inclusive settings is a primary factor behind these gaps. Many participants emphasized the need for guided practice, hands-on experience, and mentorship during their preparation. This convergence of quantitative and qualitative evidence underscores the urgency for teacher education institutions to rebalance curricula by integrating field-based training, case-based discussions, and reflective practice alongside theoretical coursework. While participants show an ethical commitment to inclusive values such as respect for diversity and collaboration with families, their knowledge of assessment design, instructional adaptation, and strategies to address environmental barriers remains limited. These shortcomings stem less from resistance than from insufficient preparation, pointing to the need for inclusive education as a sustained experiential component to ensure practical competence.

Perceptions of inclusive education

a. Attitudes toward inclusion

Assessing pre-service teachers' attitudes toward inclusive education is essential to understanding their readiness to foster equitable and supportive learning environments. The Scale of Attitudes toward Inclusion, administered to 298 participants, measured both their beliefs about inclusive principles and their willingness to apply them in real classrooms. The analysis revealed a generally favorable orientation, with many endorsing the ethical and pedagogical value of inclusion, though some showed hesitation in specific areas. These findings highlight strong support but also notable attitudinal gaps that may affect future practice. Insights from two FGD sessions provided a deeper context. Figure 2 shows the distribution across seven response levels.

This is an Open Access article, published by Universitas Jambi, Indonesia

Figure 2. *Distribution of prospective teachers' attitude scale towards inclusion*

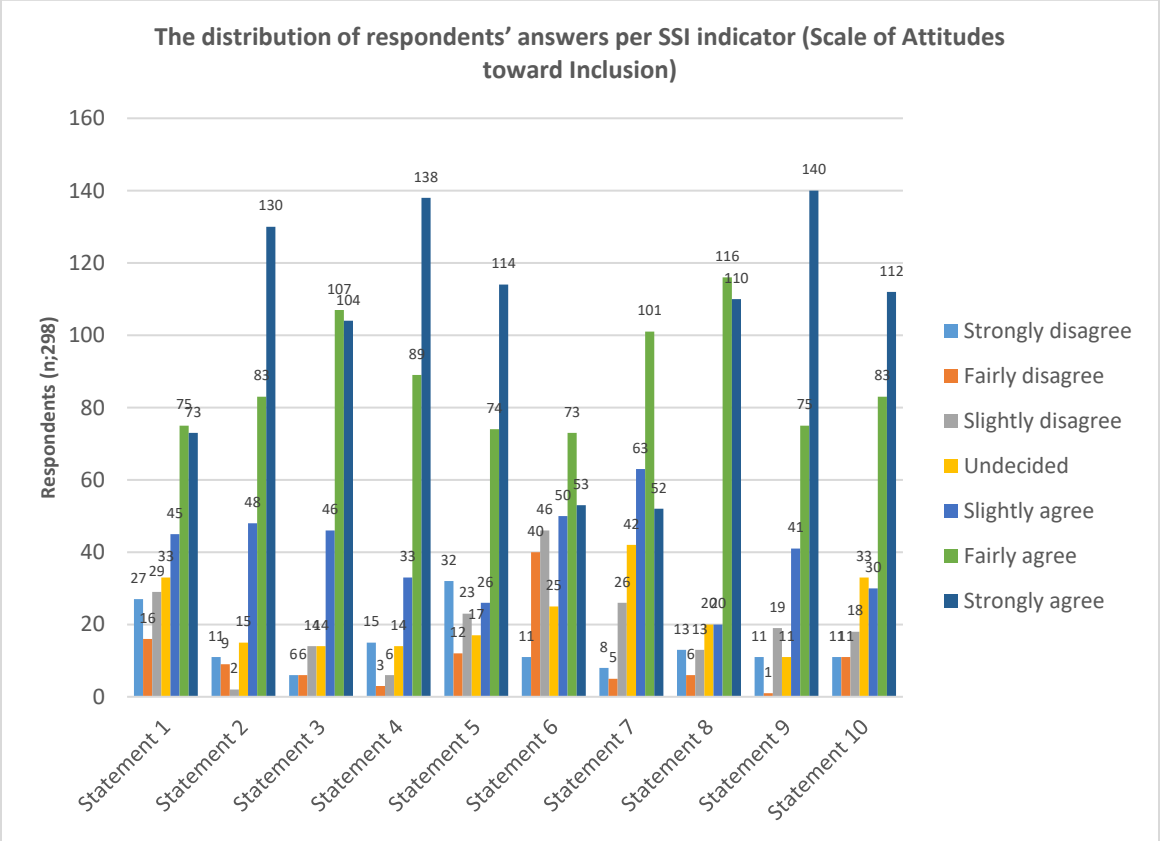

Figure 2 presents the distribution of responses from 298 pre-service teachers across the seven Likert-scale categories in the instrument, designed to assess their attitudes toward inclusive education. The visualization highlights the relative weight of each category, ranging from "strongly disagree" to "strongly agree," and clarifies the overall stance of the participants. Several indicators received exceptionally strong support, as evidenced by the high frequency in the "strongly agree" category. For example, Statement 2 recorded 130 respondents in "strongly agree" and another 83 in "agree," while only a small minority, fewer than 15 participants, expressed disagreement. Similarly, Statement 4 received 138 respondents who strongly agreed and 89 who agreed, indicating overwhelming endorsement of this aspect of inclusion. Statement 10 showed a comparable pattern, with 140 respondents in "strongly agree" and 83 in "agree." These items generally reflected the ethical commitment to inclusion and the belief that inclusive practices improve access and learning opportunities for students with diverse needs. As one participant in the FGD remarked:

> "Inclusive classrooms give all children equal opportunities to develop their strengths" (P25, Session 2),

This is an Open Access article, published by Universitas Jambi, Indonesia

While another added:

> "Seeing students with special needs motivates me to be a better teacher" (P7, Session 1).

Such statements reinforce that the strong endorsement of inclusive education among pre-service teachers is rooted not merely in policy compliance but in deeply held ethical convictions and professional values that guide their vision of equitable and collaborative classroom practice.

Indicators such as Statement 5 and Statement 8 also showed strong endorsement, though the proportions in the top category were slightly lower than in Statements 2, 4, and 10. For instance, Statement 5 recorded 114 respondents who selected "strongly agree," 74 who selected "agree," and 32 who selected "slightly agree," while about 23 participants chose "undecided." Negative responses here were relatively minimal, but the slightly larger share of "undecided" answers suggests that not all participants were fully certain about their stance. A similar pattern appeared in Statement 8, with 110 respondents in "strongly agree," 116 in "agree," and only a handful fewer than 10 expressing disagreement. This moderate level of uncertainty was also reflected in FGD comments. One participant observed:

> "Inclusion is good, but sometimes teachers need more guidance to adapt lessons for everyone" (P19, Session 1).

Such remarks suggest that additional preparation, structured guidance, and continuous institutional support are crucial to help transform participants' cautious agreement with inclusive practices into firm, confident commitments that can be consistently translated into effective classroom implementation.

A more varied pattern appeared in items such as Statements 1, 6, and 7, which attracted a noticeable spread across positive, undecided, and lower categories. For Statement 1, for instance, 73 respondents chose "strongly agree," 75 chose "agree," and 45 chose "slightly agree," while about 27 selected "strongly disagree" and 33 chose "moderately disagree." Similarly, Statement 6 recorded 53 respondents in "strongly agree," 73 in "agree," and 50 in "slightly agree," but also included 46 in "slightly disagree" and 25 in "moderately disagree." These patterns suggest some uncertainty about the practical implications of inclusion. This sentiment was mirrored in the FGDs. One participant admitted:

> "I feel anxious about balancing attention between students with and without special needs" (P4, Session 1)

While another noted:

> "We believe in inclusion, but it is challenging without enough classroom support" (P23, Session 2).

Such remarks explain the variation in responses by showing that while participants generally support inclusion, their confidence falters in real classroom contexts, highlighting the pressing need for practical strategies, hands-on experiences, and sustained mentorship in teacher preparation.

This is an Open Access article, published by Universitas Jambi, Indonesia

Indicators such as Statements 3 and 9 displayed relatively higher proportions of mid-level responses, particularly in the "undecided" and "slightly agree" categories. For Statement 3, only 104 respondents chose "agree" and 107 selected "slightly agree," while smaller numbers, about 14 in "slightly disagree" and 6 in "moderately disagree," indicated limited opposition. A similar tendency appeared in Statement 9, which recorded 112 respondents in "strongly agree," 83 in "agree," and 41 in "slightly agree," alongside modest proportions of 19 in "slightly disagree" and 11 in "moderately disagree." These patterns reveal that while most participants favor inclusion, some remain cautious about its real-world implementation. An FGD participant reflected this uncertainty, saying:

> "Sometimes policies about inclusion look good on paper but are harder to apply in under-resourced schools" (P14, Session 1).

These insights highlight that improving overall classroom readiness through enhanced teacher training, resource provision, and institutional collaboration, combined with supportive conditions, can effectively reduce hesitation, fostering greater confidence and more consistent application of inclusive practices among future educators.

Overall, the distribution in Figure 2 demonstrates that pre-service teachers generally hold positive attitudes toward inclusive education, with the highest levels of support concentrated in key principles such as equity and collaborative practices. The combined 2,304 responses in the positive categories (strongly agree, agree, slightly agree) far outweigh the 450 responses in the negative categories, reflecting strong normative acceptance of inclusion. However, the visible presence of "undecided" and mildly disagreeing respondents suggests that confidence in practical implementation remains uneven. Insights from the FGDs indicate that this variation stems less from resistance to inclusive ideals and more from limited experience, lack of preparation, and concerns about resources. Addressing these gaps through enhanced field-based training, practical guidance, and supportive policies will be crucial to converting favorable attitudes into confident, effective classroom practices. These findings underscore that sustaining inclusive education requires not only positive dispositions but also systemic and pedagogical readiness.

b. Intention to teach in inclusive classrooms

Assessing pre-service teachers' intentions to teach in inclusive classrooms provides valuable insight into how positive attitudes translate into classroom practices. The Inclusive Teaching Intention Scale, administered to 298 respondents, measured readiness to adapt curricula, collaborate with families and colleagues, engage in professional development, and implement inclusive strategies. Figure 3 presents the distribution of responses across seven levels, from "strongly disagree" to "strongly agree." Overall, the chart indicates a favorable orientation toward inclusive teaching, though some hesitation remains. Insights from two FGD sessions enrich these findings, revealing that practical concerns such as limited resources, heavy workloads, and insufficient classroom experience often shape candidates' intentions.

This is an Open Access article, published by Universitas Jambi, Indonesia

Figure 3. *Distribution of prospective teachers' intentions to teach inclusive classes*

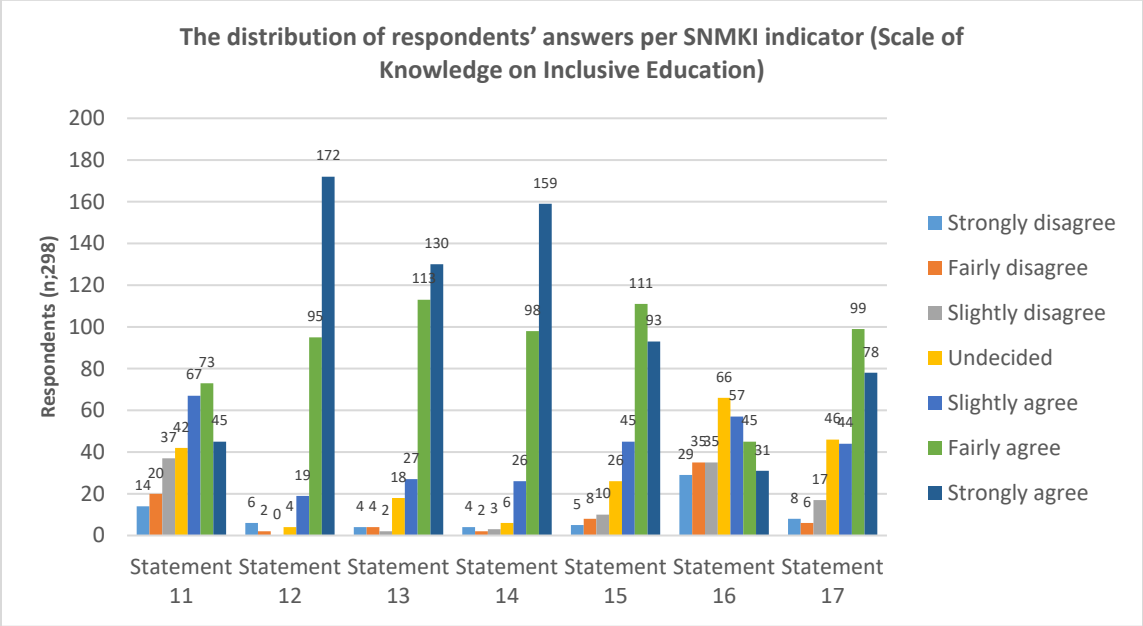

Figure 3 presents the distribution of responses from 298 pre-service teachers across the seven Likert-scale categories in the instrument; the strongest endorsements were for indicators emphasizing collaboration and ongoing professional engagement. Statement 12, which addressed working closely with parents of students with learning difficulties, recorded 172 respondents in "strongly agree" and 95 in "agree." At the same time, opposition was minimal, with only six "strongly disagree" and two "disagree." Similarly, Statement 13, concerning teamwork with colleagues to address learners' needs, garnered 130 in "strongly agree" and 113 in "agree." Equally encouraging was Statement 14, which focused on the willingness to participate in professional development for inclusive education, with 159 respondents selecting "strongly agree" and 98 selecting "agree." These results highlight strong intentions to collaborate with key stakeholders, a critical factor in inclusive practice. One participant in FGD Session 2 stated:

> "We need to work with parents and other teachers to understand each child's needs better" (P28, Session 2)

While another added:

> "Joining training programs helps us feel more confident to teach inclusively" (P18, Session 1).

These perspectives affirm that collaboration and professional learning are not optional but essential practices, underscoring the importance of sustained institutional support to translate intentions into consistent action.

More moderate yet still positive support was observed for intentions to adapt teaching and assessment practices. Statement 11, addressing the modification of curricula for students

This is an Open Access article, published by Universitas Jambi, Indonesia

with special needs, showed 73 respondents selecting "agree" and 45 choosing "strongly agree," while a noticeable minority expressed reluctance: 14 "strongly disagree," 20 "disagree," and 37 "somewhat disagree." Meanwhile, Statement 17, which examined intentions to adapt assessment methods, revealed strong but slightly cautious support, with 78 in "strongly agree," 99 in "agree," and 44 in "somewhat agree," counterbalanced by 46 undecided respondents and smaller proportions expressing disagreement. These mixed responses indicate that while most participants recognize the importance of curricular and assessment flexibility, a significant group still feels uncertain about their ability to implement these adjustments effectively. As one participant in FGD Session 1 observed:

> "We agree with adapting lessons and assessments, but we need clear examples and guidance to do it properly" (P12, Session 1).

These insights highlight that training programs must include concrete models and guided practice to bridge the gap between conceptual agreement and confident implementation in diverse classrooms.

The greatest hesitation emerged in Statement 16, which measured the intention to include students with severe disabilities in social and classroom activities. Here, only 31 respondents selected "strongly agree" and 45 chose "agree," while 29 "strongly disagreed," 35 "disagreed," and another 35 "somewhat disagreed." Notably, 66 respondents were "undecided," highlighting widespread caution in this area. These figures reveal that, despite the general commitment to inclusive education, candidates remain uncertain about how to engage students with complex needs in mainstream classrooms. Comments from the FGDs shed light on this hesitation. A participant from Session 2 explained:

> "Including students with severe disabilities is meaningful, but without trained assistants and facilities, we don't know how to support them properly" (P6, Session 2).

Another added:

> "Teachers may want to include them, but they worry about managing diverse needs effectively" (P15, Session 1).

These findings suggest that participants' reluctance is less about opposing inclusion and more about the lack of systemic resources and preparation, reinforcing the urgent need for practical training and structural support in schools.

Overall, the Inclusive Teaching Intention Scale highlights a predominantly positive orientation among pre-service teachers toward inclusive education. The supportive categories "strongly agree," "agree," and "somewhat agree" together accounted for over 1,600 responses, far exceeding the 250 responses in all forms of disagreement and the 208 in the "undecided" category. The mean score of 5.5 reinforces this positive trend, indicating strong endorsement of inclusive principles and a willingness to implement them in practice. Nevertheless, persistent hesitation, especially regarding curriculum adaptation and engagement with students with severe disabilities, underscores the need for targeted interventions, such as field-based experiences and practical training, to translate intentions into consistent, effective classroom actions.

This is an Open Access article, published by Universitas Jambi, Indonesia

Concerns about inclusive classrooms

Assessing pre-service teachers' concerns about inclusive classrooms is essential to understanding the challenges they anticipate in implementing inclusive practices. The Scale of Concerns about Inclusive Classrooms, administered to 298 participants, measured perceptions of potential barriers, including resource limitations, classroom management, workload, and professional readiness. Figure 4 presents the distribution of responses across four levels of concern: "very highly concerned," "highly concerned," "slightly concerned," and "not concerned at all." This visual representation highlights not only the overall prevalence of moderate concerns but also areas where significant apprehension persists, providing insights into practical issues that must be addressed to strengthen teacher preparedness for inclusive education.

Figure 4. *Distribution of prospective teachers' concerns about inclusive classrooms*

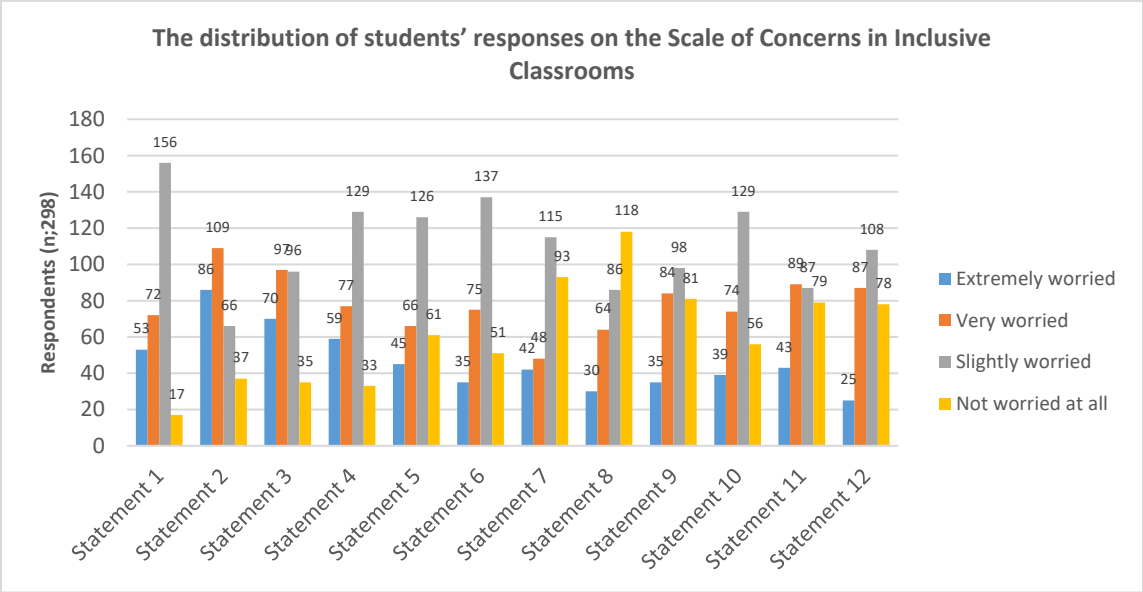

Figure 4 illustrates the distribution of pre-service teachers' concerns about inclusive classrooms across four categories: "very highly concerned," "highly concerned," "slightly concerned," and "not concerned at all." The pattern reveals that most respondents fall into the "slightly concerned" category (1,177 responses), followed by "highly concerned" (870 responses), with the more extreme levels accounting for 509 responses, and the "not concerned at all" group accounting for 722 responses. This pattern suggests that most teacher candidates experience moderate concern, reflecting practical caution rather than opposition to inclusion. As one FGD participant explained:

> "We understand the benefits of inclusion, but we worry because school facilities and support are still uneven" (P6, Session 1).

This indicates that pre-service teachers' concerns arise primarily from contextual constraints such as limited facilities, insufficient support, and unequal access to resources rather than from

This is an Open Access article, published by Universitas Jambi, Indonesia

opposition to the concept of inclusion itself, reflecting practical challenges that influence their readiness to implement inclusive practices effectively in real classroom settings.

High levels of concern were particularly evident regarding resources and staffing support. Statement 1, addressing school funding, recorded 53 respondents as very highly concerned and 72 as highly concerned, while Statement 2, focusing on the availability of para-professional staff, recorded 86 as very highly concerned and 109 as highly concerned. These concerns were echoed in the FGDs, with one participant stating:

> "Schools often lack assistive tools or specialist staff, so teachers have to handle everything themselves" (P9, Session 1).

Another added:

> "In rural schools, the biggest problems are funding and staffing even basic facilities are inadequate" (P23, Session 2).

These findings highlight that the anxiety expressed by many pre-service teachers stems largely from structural and systemic barriers, including inadequate funding, limited staffing, and a lack of institutional support, rather than from reluctance to embrace inclusion as part of their professional responsibilities.

Significant concerns also focused on classroom dynamics and workload. Statement 4, concerning classroom discipline, recorded 59 respondents as very highly concerned and 77 as highly concerned, while Statement 12, addressing increased workload, recorded 25 as very highly concerned, 87 as highly concerned, and 108 as slightly concerned. The FGDs reinforced these concerns, with one participant commenting:

> "It's harder to manage classrooms in inclusive settings because attention is divided" (P7, Session 1),

Another adding:

> "Inclusive teaching clearly increases workload because lesson preparation becomes more complex" (P37, Session 2).

These insights underscore that teachers' apprehensions are primarily linked to practical challenges, such as managing diverse classrooms, balancing workloads, and ensuring adequate instructional support, rather than to conceptual disagreement with the value of inclusion, emphasizing the need for targeted preparation and institutional backing to strengthen their confidence.

Despite widespread concerns, a significant portion of respondents reported confidence in handling inclusive classrooms. For example, Statement 8 on teachers' performance recorded 118 respondents as not concerned at all, and Statement 9 on regular students' achievement recorded 81 respondents as not concerned at all. This confidence suggests that some teacher candidates feel ready to meet the demands of inclusive classrooms, likely due to prior exposure, relevant training, or strong belief in inclusive practices. However, the FGDs revealed that many still require practical support, including classroom management training, professional mentoring, and differentiated instruction strategies. These combined findings

This is an Open Access article, published by Universitas Jambi, Indonesia

highlight that reducing concerns requires not only attitudinal change but also the provision of adequate resources and systemic support to ensure the successful implementation of inclusive education.

Efficacy for inclusive practices

Assessing pre-service teachers' efficacy for inclusive practices is essential to understanding their readiness to translate inclusive principles into effective classroom action. The Pre-Service Teacher Efficacy Scale for Inclusive Practices (FS-SEGPI), administered to 298 participants, measured their confidence in key domains, including instructional adaptation, classroom management, and collaboration with families and professionals. Figure 5 illustrates the overall distribution of responses, which predominantly clustered in the "agree" and "strongly agree" categories across most items, reflecting a high level of self-efficacy. These findings, supported by qualitative insights from two FGD sessions, reveal that while candidates demonstrate strong conceptual understanding and confidence, they also emphasize the need for authentic classroom experiences to strengthen and sustain these beliefs in real teaching contexts.

Figure 5. *Distribution of prospective teachers' efficacy for inclusive practices*

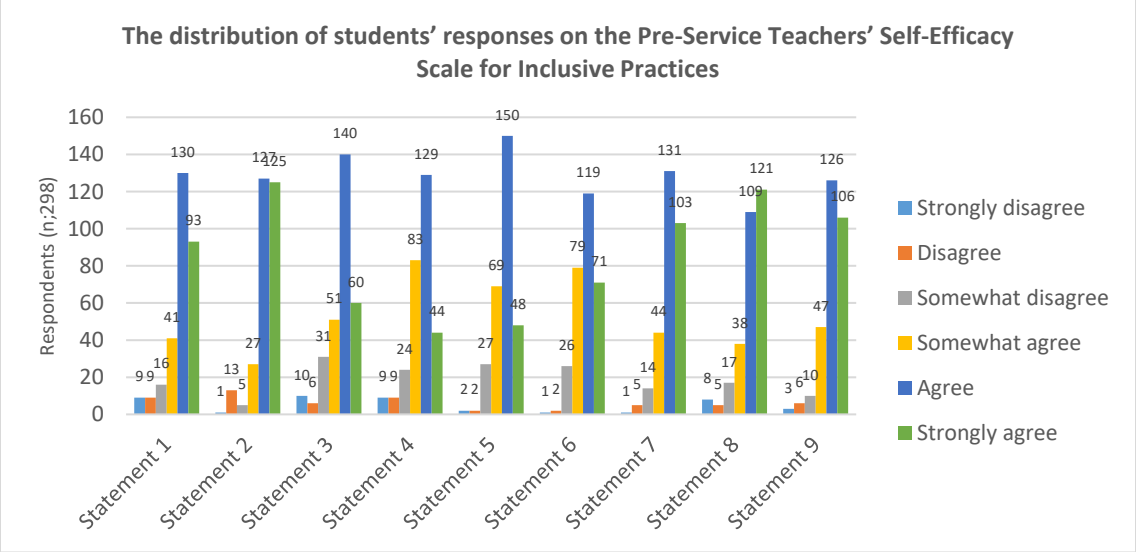

Figure 5 presents the distribution of pre-service teachers' responses regarding their efficacy for inclusive classroom practices. The results show a generally high level of self-efficacy, as indicated by the dominance of the "agree" and "strongly agree" categories across most items. The highest single category response appears in Statement 5, where 150 respondents selected "agree". Other strong concentrations were seen in Statement 1 with 130 "agree" and 93 "strongly agree," and in Statement 2 with 127 "agree" and 125 "strongly agree." Negative responses were minimal, generally fewer than 20 in the "strongly disagree" and "disagree" categories for most items. This overall pattern suggests that most respondents feel capable of implementing inclusive teaching strategies effectively, reflecting a promising baseline of confidence that could be further strengthened through structured training and practice. These figures align with the FGD insights. A participant in Session 1 shared:

This is an Open Access article, published by Universitas Jambi, Indonesia

> "I feel confident about working in inclusive classrooms, but I still need more exposure to real situations to strengthen my strategies" (P11, Session 1)

Similarly, a participant in Session 2 emphasized:

> "We have learned the concepts but applying them effectively needs practical experience" (P29, Session 2).

These remarks confirm that strong self-efficacy among pre-service teachers is grounded in a solid conceptual understanding of inclusive practices, yet it still requires authentic classroom exposure to transform theoretical knowledge into practical competence, ensuring that confidence is consistently applied in real-world teaching situations.

Instructional adaptation emerged as one of the strongest areas of efficacy. Statement 2, focused on providing alternative explanations when students face difficulties, recorded 127 "agree" and 125 "strongly agree" responses, with only 1 "strongly disagree" and 5 "disagree." This distribution demonstrates a firm belief in their ability to adjust teaching methods to meet diverse learning needs. Statement 1, which addressed the use of varied assessment strategies, received 130 "agree" and 93 "strongly agree," while only a small fraction, 9 "strongly disagree" and 9 "disagree," expressed lack of confidence. These patterns suggest that pre-service teachers have developed a strong conceptual understanding of how to adapt instruction and assessment to support students with varying abilities, though the small percentage of hesitant respondents indicates the need for more field-based experience to consolidate this confidence. As highlighted by a participant:

> "It's sometimes challenging to find the right way to explain concepts to students with different needs" (P12, Session 1).

Another participant added:

> "Patience and creativity are necessary, but these come from actual classroom practice" (P32, Session 2).

These comments underscore that pedagogical confidence is not developed solely through coursework or theoretical preparation but is closely tied to meaningful hands-on experience, where direct engagement with diverse learners strengthens teachers' skills, builds adaptability, and enhances their readiness to address real challenges in inclusive classrooms.

A similarly strong sense of efficacy appeared in classroom management items. Statement 5, which measured confidence in calming disruptive students, recorded 150 "agree" and 48 "strongly agree," while negative responses were negligible, with only 2 in "strongly disagree" and 2 in "disagree." Statement 6, focusing on enforcing classroom rules in an inclusive setting, had 119 "agree" and 71 "strongly agree," with just 1 "strongly disagree" and 2 "disagree." Statement 4, which related to preventing disruptions, achieved 129 "agree" and 44 "strongly agree." These figures reveal that most respondents feel assured in their ability to maintain a supportive learning environment in inclusive classrooms, although around 20-30 respondents across these items expressed uncertainty or mild disagreement, reflecting the challenges often faced when theory meets the realities of managing diverse classrooms. This highlights the

This is an Open Access article, published by Universitas Jambi, Indonesia

participants' recognition of parents as key partners in supporting inclusive education. A participant explained:

> "Parents understand their children best, so close collaboration is essential" (P2, Session 1).

Complementing this, a participant stated:

> "Consultation with parents helps align teaching strategies and student needs" (P24, Session 2).

These FGD insights reinforce the survey findings by demonstrating that candidates regard collaboration with families as a vital component of inclusive practice, recognizing that parents' knowledge of their children's needs is indispensable for designing effective strategies and building strong partnerships that support equitable learning outcomes.

Collaboration with colleagues, parents, and professionals also demonstrated high levels of efficacy. Statement 7, emphasizing teamwork with other staff, recorded 131 "agree" and 103 "strongly agree," with only 14 "strongly disagree" and 5 "disagree." Statement 8, related to engaging parents in inclusive practices, had 121 "agree" and 109 "strongly agree," whereas only 8 "strongly disagree" and 5 "disagree." Likewise, Statement 9, concerning collaboration with specialists, was endorsed by 126 "agree" and 106 "strongly agree," with merely 3 "strongly disagree" and 6 "disagree." These results indicate that pre-service teachers recognize the importance of collaborative approaches in inclusive education and feel prepared to work with families and professional partners to support students with special needs, although a small portion of respondents expressed hesitancy, suggesting a need for practical exposure to multi-stakeholder collaboration. A participant in session 1 shared:

> "Inclusive education cannot rely solely on teachers; it needs the support of parents and other professionals" (P9, Session 1).

Another in Session 2 noted:

> "Consultations help teachers design effective strategies for each student" (P38, Session 2).

These perspectives highlight that collaboration among teachers, parents, and professionals is not optional but a fundamental requirement for the success of inclusive education, ensuring that the diverse needs of students are collectively addressed through shared responsibility and coordinated efforts.

Overall, the results show a mean score of 4.9, categorized as "very high," which highlights a strong sense of readiness among pre-service teachers for inclusive practices. The combined "agree" and "strongly agree" responses overwhelmingly outnumber those expressing uncertainty or disagreement across all nine items. Nonetheless, the presence of small but consistent pockets of hesitation reflected in the 20-40 responses in "somewhat agree" or "somewhat disagree" suggests that while theoretical understanding and self-belief are strong, ongoing mentoring and guided practicum experiences are needed to ensure these teachers can consistently translate their efficacy beliefs into effective, inclusive classroom

This is an Open Access article, published by Universitas Jambi, Indonesia

practices. This highlights the importance of field-based training in bridging the gap between conceptual preparation and sustained performance across diverse educational contexts.

Discussion

The findings of this study illustrate the complexity of prospective teachers' preparedness in Indonesia for implementing inclusive education. Overall, they exhibit positive attitudes and a sense of moral responsibility towards all students, along with relatively high levels of efficacy. This readiness is currently inconsistent and remains a conceptual framework. Misunderstandings persist regarding the scope of inclusion, alongside concerns about workload and resource limitations. This condition illustrates the attitude-efficacy paradox (Avramidis et al., 2019), highlighting the discrepancy between beliefs regarding inclusive values and the actual capabilities for implementation. This situation highlights the necessity for reform in teacher education that harmonizes spiritual, pedagogical, and professional values at Islamic universities (Yada et al., 2021).

The findings align with research conducted in Ghana and Bangladesh, which indicated strong ideological support for inclusive education yet revealed a deficiency in pedagogical skills (Ahmmed et al., 2012; William, 2011). In Australia and Canada, positive attitudes correlate with direct experience in teaching students with disabilities (Sharma et al., 2006). Conversely, in South Africa, teachers exhibit lower confidence levels attributed to insufficient training (Potgieter-Groot et al., 2012). The variations indicate that teacher readiness is significantly affected by the social context and the support provided by the education system. According to Paneque and Barbetta (2006), optimism bias in self-assessment may result in a discrepancy between perceived and actual abilities. Consequently, while prospective teachers generally endorse inclusion, it remains essential to provide implementative reinforcement through contextual training (Sholihah, 2024).

According to the Theory of Planned Behavior (TPB), attitudes, self-efficacy, and concerns significantly influence the intention to teach inclusively (Ajzen, 1991). Despite possessing strong moral motivation, prospective teachers' intention to practice is diminished by inadequate facilities and structural support. This highlights the significance of contextual factors in connecting attitudes and behavior (Yan & Sin, 2014). Within the Islamic framework, the principles of adl (justice) and rahmah (compassion) serve as subjective norms that enhance spiritual motivation for inclusion (Maidugu & Isah, 2024). A medical-oriented perspective on disability may impede the implementation of these values (Pradana et al., 2023). Therefore, the Theory of Planned Behavior offers a framework for analyzing the interaction between religious beliefs and teacher efficacy in influencing preparedness for inclusive education.

This study highlights the necessity for enhanced field experience within teacher education programs. Active participation in inclusive educational settings, engagement in learning simulations, and reflection grounded in values have been shown to enhance efficacy and favorable attitudes (Dolby & Rahatzad, 2018; Donath et al., 2023). Curriculum reform in Islamic universities is essential to integrate theoretical and practical dimensions and ensure that prospective teachers are adequately prepared. A significant disparity persists between national regulations and their implementation in practice. Permendiknas No. 70/2009 has established a legal basis, but the support and supervision of implementation remain inadequate. The government needs to standardize inclusive pedagogy modules in all PPG programs and strengthen collaboration between universities and local communities (Nasution et al., 2024).

This is an Open Access article, published by Universitas Jambi, Indonesia

The limitations of this study must be recognized. Using self-report instruments raises the likelihood of social bias and respondent optimism (Paneque & Barbetta, 2006). The cross-sectional approach fails to capture changes in attitudes over time, and the sample size of only one Islamic university limits generalizability (Enworo, 2023). Future studies should adopt a longitudinal design to better analyze the dynamics of attitudes and efficacy (Jha, 2023). Furthermore, comparing Islamic and non-Islamic universities can help us better understand the impact of institutional principles on inclusivity. A qualitative study of the effects of theological interpretations on disability perceptions is also required to better understand the relationship between religious ideals and inclusive practices.

Conclusion and Recommendations

This study demonstrates that prospective teachers at FITK UIN Sumatera Utara exhibit adequate initial readiness for inclusive education, particularly in terms of attitude and self-efficacy. However, notable gaps persist in their knowledge and the practical application of inclusive education principles. While the positive attitudes and strong intentions of these pre-service teachers to engage in inclusive practices reflect a normative commitment to the principle of equality, concerns about insufficient resources and structural support indicate that their preparedness remains incomplete. Theoretically, these findings corroborate the attitude-efficacy dilemma, which holds that positive attitudes and intentions must be complemented by institutional support and practical experience to be effectively translated into inclusive teaching behaviors.

The practical implications of this study underscore the need to enhance the teacher education curriculum, specifically by integrating Universal Design for Learning (UDL) across all study programs. Teacher training institutions (LPTKs) should prioritize the provision of authentic practical experiences in inclusive settings, establish partnerships with special schools and service centers, and offer continuous training and reflective supervision for teacher educators and mentor teachers. At the policy level, the government is expected to standardize pre-service competencies in UDL and the Multi-Tiered System of Supports (MTSS), allocate specific budgets for inclusion-related accommodations and training, and develop inclusion-based performance and accreditation indicators for LPTKs and schools.

While the study provides valuable insights, its scope is limited to a specific region and population. Future research employing longitudinal or comparative methodologies across different LPTKs is recommended to assess the long-term impact on prospective teachers' attitudes, efficacy, and professional practices in inclusive education.

Disclosure Statement

No potential conflict of interest was reported by the authors.

Acknowledgments

This study was funded by Bantuan Operasional Perguruan Tinggi Negeri/ *BOPTN* (Operational Assistance for State Universities) 2025, Universitas Islam Negeri Sumatera Utara.

This is an Open Access article, published by Universitas Jambi, Indonesia

References

Ahmmed, M., Sharma, U., & Deppeler, J. (2012). Variables affecting teachers' attitudes towards inclusive education in Bangladesh. *Journal of Research in Special Educational Needs, 12*(3), 132–140. https://doi.org/10.1111/j.1471-3802.2011.01226.x

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

Ainscow, M. (2020). Inclusion and equity in education: Making sense of global challenges. *Prospects, 49*, 123-134. https://doi.org/10.1007/s11125-020-09506-w

Ajzen, I. (1991). The Theory of Planned Behavior. *Organizational Behavior and Human Decision Processes, 50*(2), 179–211. https://doi.org/10.1016/0749-5978(91)90020-T

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

Anshari, M. (2023). Inclusive Madrasah: Concepts, Approaches, and Policies. *El-Buhuth: Borneo Journal of Islamic Studies*, *5*(2), 267–281. https://doi.org/10.21093/el-buhuth.v5i2.5986

Arnaiz-Sanchez, P., de Haro-Rodriquez, R., & Maldonado Martinez, R. (2019). Barriers to student learning and participation in an inclusive school as perceived by future education professionals. *Journal of New Approaches in Educational Research (NAER Journal), 8*(1), 18-24. https://doi.org/10.7821/naer.2019.1.321

Avramidis, E., Toulia, A., Tsihouridis, C., & Strogilos, V. (2019). Teachers' attitudes towards inclusion and their self-efficacy for inclusive practices as predictors of willingness to implement peer tutoring. *Journal of Research in Special Educational Needs*, *19*(S1), 49–59. https://doi.org/10.1111/1471-3802.12477

Booth, T. & Ainscow, M. (2002*). Index for inclusion, developing learning and participation in schools.* Centre for Studies on Inclusive Education (CSIE). https://www.eenet.org.uk/resources/docs/Index%20English.pdf

Boyle, C., Topping, K., & Jindal-Snape, D. (2013). Teachers attitudes towards inclusion in high schools. *Teachers and Teaching: Theory and Practice*, *19*(5), 527–542. https://doi.org/10.1080/13540602.2013.827361

Creswell, J. W. (2014). *Research design, qualitative, quantitative, and mixed methods approaches*. SAGE Publication.

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

Dolby, N., & Rahatzad, J. (2018). Experiential learning in teacher education: Increasing awareness of diversity through the immersion experience. *ELTHE: A Journal for Engaged Educators*, *2*(1), 7–25. https://doi.org/https://doi.org/10.46787/elthe.v2i1.3434

Donath, J. L., Lüke, T., Graf, E., Tran, U. S., & Götz, T. (2023). Does Professional Development Effectively Support the Implementation of Inclusive Education? A Meta-Analysis. *Educational Psychology Review*, *35*(1), 1–28. https://doi.org/10.1007/s10648-023-09752-2

Enworo, O. C. (2023). Application of Guba and Lincoln's parallel criteria to assess trustworthiness of qualitative research on indigenous social protection systems. *Qualitative Research Journal, 23*(4), 372–384. https://doi.org/10.1108/QRJ-08-2022-0116

Forlin, C. & Chambers, D. (2011). Teacher preparation for inclusive education: Increasing knowledge but raising concerns. *Asia-Pacific Journal of Teacher Education, 39*(1), 17–32. https://doi.org/10.1080/1359866X.2010.540850

Gariazzo, J. (2010). Book review: Ann Cheryl Armstrong, Derrick Armstrong and Ilektra Spandagou, inclusive education: International policy and practice. *Management in Education*, *24*(4), 173–173. https://doi.org/10.1177/0892020610377566

Goddard, C., & Evans, D. (2018). Primary pre-service teachers' attitudes towards inclusion across the training years. *Australian Journal of Teacher Education, 43*(6), 122-142. https://doi.org/10.14221/ajte.2018v43n6.8

Hemmings, B. & Woodcock, S. (2011). Preservice teachers' views of inclusive education: A content analysis. *Australasian Journal of Special Education, 35*(2), 103-116. https://doi.org/10.1375/ajse.35.2.103

Imaniah, I., & Fitria, N. (2018). Inclusive education for students with disability. *SHS Web of Conferences*, *42*, 00039. https://doi.org/10.1051/shsconf/20184200039

Jacob, U. S., & Pillay, J. (2022). A comparative study of pre-service teachers' knowledge and perceptions of, and attitudes toward, inclusive education. *Frontiers in Education*, *7,* 1012797. https://doi.org/10.3389/feduc.2022.1012797

Jardinez, M. J., & Natividad, L. R. (2024). The advantages and challenges of inclusive education: Striving for equity in the classroom. *Shanlax International Journal of Education, 12*(2), 57–65. https://doi.org/10.34293/education.v12i2.7182

Jha, A. (2023). *Social research methodology*. Routledge India.

Kalyanpur, M. (2016). Inclusive education policies and practices in the context of international development: Lessons from Cambodia. *ZEP: Zeitschrift für Internationale Bildungsforschung und Entwicklungspädagogik, 39*(3), 16-21. https://doi.org/10.25656/01:15452

Kanter, A. (2019). The right to inclusive education for students with disabilities under International Human Rights Law. *The Right to Inclusive Education in International Human Rights Law*, 15–57. https://doi.org/10.1017/9781316392881.003

Lazano, C. S., Wüthrich, S., Baumli, N., Sharma, U., & Loreman, T., & Forlin, C. (2023). Development and validation of a short form of the Teacher Efficacy for Inclusive Practices Scale (TEIP-SF). *Journal of Research in Special Educational Needs (JORSEN)*, *23*(4), 375-388. https://doi.org/10.1111/1471-3802.12607

Maidugu, U. A., & Isah, A. T. (2024). Islamic education and its value: A vital means for the formation of national character. *Bulletin of Islamic Research, 2*(4), 725–744. https://doi.org/10.69526/bir.v2i4.165

Materechera, E. K. (2020). Inclusive education: Why it poses a dilemma to some teachers. *International Journal of Inclusive Education, 24*(7), 771-786. https://doi.org/10.1080/13603116.2018.1492640

Nasution, J. E., Suparman, S., & Nurhayati, B. (2024). Inclusive Islamic education: The role of religious moderation in transformation of Islamic education institutions in Riau. *AL-ISHLAH: Jurnal Pendidikan, 16*(2), 1664–1672. https://doi.org/10.35445/alishlah.v16i2.5188

Paneque, O. M., & Barbetta, P. M. (2006). A Study of Teacher Efficacy of Special Education Teachers of English Language Learners With Disabilities. *Bilingual Research Journal*, *30*(1), 171–193. https://doi.org/10.1080/15235882.2006.10162871

Potgieter-Groot, L., Visser, M., & Lubbe-De Beer, C. (2012). Emotional and behavioural barriers to learning and development in the inclusive education classrooms in South Africa: Developing a training programme for teachers. *Journal of Child and Adolescent Mental Health, 24*(1), 59–71. https://doi.org/10.2989/17280583.2011.639775

Pov, S., & Kawai, N. (2024). Are teachers adequately prepared for inclusive classrooms in Cambodia? Knowledge and experience for inclusive practices. *International Journal of Instruction, 1*(3), 491-508. https://doi.org/10.29333/iji.2024.17327a

Pradana, D. A., Mahfud, M., & Priyanto, H. (2023). Harmonizing Faith and Inclusion: Integrating Religious Values in Inclusive Education. *EDUKASIA: Jurnal Pendidikan dan Pembelajaran, 4*(2), 1877–1884. https://doi.org/https://doi.org/10.62775/edukasia.v4i2.516

Ramadhani, A. Y., & Fithriani, R. (2022). English instruction for special educational needs: A narrative inquiry of a learning support assistant. *LANGUAGE CIRCLE: Journal of Language and Literature, 17*(1), 49-60. https://journal.unnes.ac.id/nju/LC/article/view/37880

Reyes, M. E., Hutchinson, C. J., & Little, M. (2017). Preparing educators to teach effectively in inclusive settings. *SRATE Journal, 26*(1), 21–29. https://eric.ed.gov/?id=EJ1134393

Ruth, O. O., Ejiwale, O. A., & Busuyi, F. J. (2020). Pre-service teachers' knowledge and their beliefs towards inclusive education: Implications for teacher education programme. *Journal of Education in Black Sea Region*, *6*(1), 119–129. https://doi.org/10.31578/jebs.v6i1.224

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. (2013). 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., 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 and Society, 13*(7), 773–785. https://doi.org/10.1080/09687590802469271

Sharma, U., Forlin, C., Loreman, T. & Earle, T. (2006). Pre-service teachers' attitudes, concerns, and sentiments about inclusive education: an international comparison of novice pre-service teachers. *International Journal of Special Education, 21*(2), 80–93. https://files.eric.ed.gov/fulltext/EJ843609.pdf

Sharma, U., Simi, J., & Forlin, C. (2015). Preparedness of pre-service teachers for inclusive education in the Solomon Islands. *Australian Journal of Teacher Education*, *40*(5). https://doi.org/10.14221/ajte.2015v40n5.6

Shneidman, E. S. (1988). *Thematic test analysis*. Routledge. https://doi.org/https://doi.org/10.4324/9781315827599

Sholihah, B. M. (2024). Pendidikan inklusi dan strategi mutu dalam mencapai kesetaraan pendidikan di Indonesia (Inclusive education and quality strategies in achieving educational equality in Indonesia). *Journal of Education and Religious Studies*, *4*(01), 08-15.

Somad, A., Haryanto, S., & Darsinah, D. (2024). Inclusive education for special needs students in Indonesia: A review of policies, practices and challenges. *JMKSP (Jurnal Manajemen, Kepemimpinan, dan Supervisi Pendidikan)*, *9*(2), 1024–1035. https://doi.org/10.31851/jmksp.v9i2.16192

UNESCO. (1994). *The Salamanca statement and framework for action on special needs education.* Paper presented at the World Conference on Special Needs Education: Access and Quality, Salamanca, Spain. https://unesdoc.unesco.org/ark:/48223/pf0000098427

William, N. (2011). *Teacher education and inclusion in Ghana: Pre-service teachers' preparedness for creating an inclusive classroom* [Master's thesis, University of Jyväskylä]. https://urn.fi/URN:NBN:fi:jyu-201203071356

Winter, E. C. (2006). Preparing new teachers for inclusive schools and classrooms. *Support for Learning*, *21*(2), 85-91. https://doi.org/10.1111/j.1467-9604.2006.00409.x

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*, 103802. https://doi.org/10.1016/j.tate.2022.103802

Yada, A., Björn, P. M., Savolainen, P., Kyttälä, M., Aro, M., & Savolainen, H. (2021). Pre-service teachers' self-efficacy in implementing inclusive practices and resilience in Finland. *Teaching and Teacher Education*, *105*, 103398. https://doi.org/10.1016/j.tate.2021.103398

Yan, Z., & Sin, K. (2013). Inclusive Education: Teachers' intentions and behaviour analysed from the viewpoint of the theory of planned behaviour. *International Journal of Inclusive Education*, *18*(1), 72–85. https://doi.org/10.1080/13603116.2012.757811