

Perceptions of Pre-Service Teachers About Inclusive Classrooms

DOI: <https://doi.org/10.63345/ijre.v14.i11.1>

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ABSTRACT

Inclusive education—wherein learners of diverse abilities, backgrounds, and needs learn together in the same classrooms—has gained recognition worldwide as both a human right and a driver of educational quality. This extended abstract elaborates on the theoretical foundations, research context, methodological rigor, and key findings of our comprehensive study examining pre-service teachers' perceptions of inclusive classrooms. Grounded in Bandura's social cognitive theory (self-efficacy) and the community of practice framework (Lave & Wenger, 1991), the study investigates attitudes, beliefs, preparedness, and concerns among 200 teacher trainees drawn from two institutions in South Asia. Overarching aims included: assessing cognitive (beliefs about benefits), affective (emotional readiness), and behavioral (intentions to implement inclusive strategies) dimensions of attitude; gauging confidence in differentiated instruction; identifying perceived barriers; and eliciting recommendations for strengthening preparation.

Methodologically, a rigorously validated questionnaire combined 25 Likert-scale items ($\alpha = 0.82$) with three open-ended prompts. Quantitative data underwent descriptive (means, SDs, frequency distributions) and inferential analyses (t-tests, ANOVA) to explore subgroup differences by gender and program level. Qualitative responses were subjected to thematic analysis following Braun and Clarke's six-phase approach, ensuring coding reliability (Cohen's $\kappa = 0.78$). The sample comprised 136

female and 64 male trainees, aged 20–28 ($M = 22.6$, $SD = 1.8$), representing undergraduate (75%) and postgraduate (25%) programs.

Key quantitative findings indicate a strong overall endorsement of inclusion (overall attitude $M = 4.1/5.0$, $SD = 0.5$), but moderate self-efficacy in adaptive strategies ($M = 3.6/5.0$, $SD = 0.7$). Notably, 68% of participants identified resource constraints (e.g., assistive technologies, co-teaching personnel) as major barriers, 61% lamented insufficient practicum exposure, and 57% cited large class sizes. Gender analyses revealed that female trainees reported slightly higher attitude scores ($M = 4.2$) than male trainees ($M = 4.0$; $t(198) = 2.14$, $p < .05$), while postgraduate trainees exhibited greater self-efficacy ($M = 3.8$) compared to undergraduates ($M = 3.5$; $F(1,198) = 5.34$, $p < .01$).

Thematic analysis surfaced three core themes: (1) Authentic Practicum Needs: over 80% of respondents stressed the necessity of sustained placements in inclusive settings, coupled with structured mentorship; (2) Collaborative Planning Imperative: participants advocated formalized co-planning sessions with special-education experts and general-education peers; and (3) Interactive Learning Modules: there was unanimous support for workshops on Universal Design for Learning, classroom management simulations, and assistive-technology demonstrations.

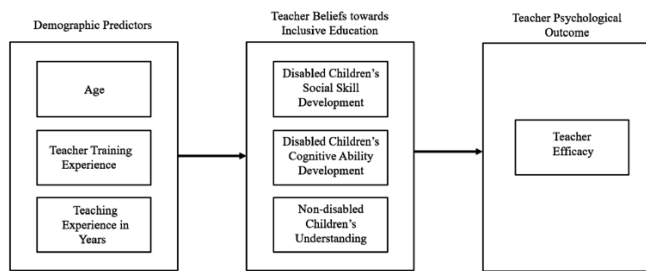


Fig.1 Perceptions of Pre-Service Teachers, [Source\(\[1\]\)](#)

These findings underscore that while pre-service teachers embrace the philosophy of inclusion, tangible confidence and competence hinge on enhanced experiential learning and systemic supports. Teacher-education programs should therefore integrate extended co-teaching practicums, scaffolded mentoring by special-education faculty, and interactive coursework. Policy recommendations include allocating funding for assistive devices, reducing pupil-teacher ratios in practicum schools, and instituting induction mentoring for novice teachers. Future longitudinal research might examine how revised curricula impact in-service teacher performance and, ultimately, student learning outcomes in inclusive classrooms.

KEYWORDS

inclusive education, pre-service teachers, attitudes, teacher preparation, survey, differentiated instruction

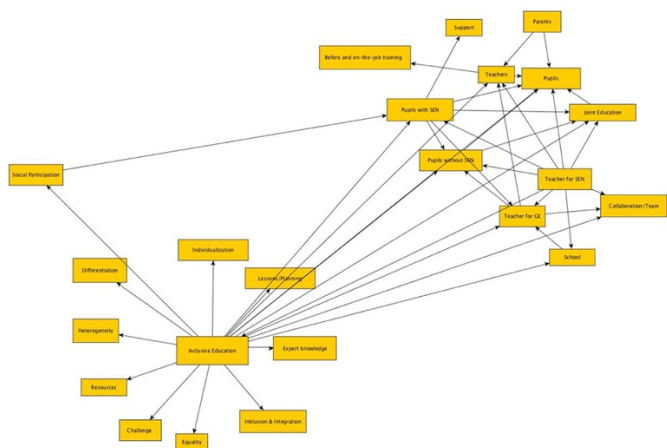
INTRODUCTION

Over the past three decades, inclusive education has evolved from a peripheral notion to a central policy goal in global educational reform. Rooted in the principle that every child—regardless of ability, socio-economic background, ethnicity, or language proficiency—has an inherent right to equitable access and participation in mainstream schooling, inclusion challenges traditional special-education segregation. The United Nations Convention on the Rights of Persons with Disabilities (2006) and UNESCO's Salamanca Statement (1994) collectively endorse inclusive practices, prompting over 160 nations to revise legislation, curricula, and teacher-education standards. Despite this policy momentum,

effective classroom-level implementation remains uneven, particularly in regions transitioning from exclusionary models.

Pre-service teachers—individuals undergoing initial teacher certification—are pivotal change agents. Their beliefs and self-efficacy influence pedagogical choices, classroom climate, and peer cultures. Social cognitive theory posits that self-efficacy—a teacher's belief in their capability to organize and execute required actions—influences motivation, perseverance, and adaptive behavior (Bandura, 1997). In parallel, Wenger's (1998) community of practice framework conceptualizes learning as social participation: novice teachers learn professional norms, strategies, and identities through engagement in legitimate peripheral participation within practitioner communities. Thus, examining pre-service teachers' attitudes and preparedness illuminates both individual and systemic dimensions of inclusion readiness.

Empirical literature offers a mixed portrait. Quantitative surveys often report generally favorable attitudes among trainees toward inclusion's moral and social benefits (Avramidis & Norwich, 2002). Yet affective unease—manifested as anxiety about classroom management or fear of insufficient content coverage—persists (Florian & Rouse, 2009). Self-efficacy in differentiated instruction, critical to accommodating varied learning needs, is positively correlated with targeted coursework and practicum placements (Forlin et al., 2011). Conversely, perceived barriers such as large class sizes, time constraints, and lack of specialist support undermine confidence (Peebles & Mendaglio, 2014). Qualitative studies further reveal a desire for authentic experiences—trainees lament observing inclusion theory in isolation from real-world practice (Cameron et al., 2015).

Classrooms, *Source*([2])

Despite growing research, gaps remain. Few studies combine robust quantitative measures with in-depth qualitative insights in large, diverse trainee samples. Moreover, comparative analyses by program level (undergraduate vs. postgraduate) and gender are underexplored. This study addresses these gaps by surveying 200 pre-service teachers across two institutions, linking scale-based attitude and self-efficacy metrics with open-ended reflections. The result is a richly textured understanding of where teacher-education programs excel—and where they must innovate—to prepare educators for inclusive classrooms.

Theoretical Foundations

Theoretical Foundations

Community of Practice. Wenger (1998) frames teacher learning as participation in social communities. Inclusion competence emerges when teacher candidates engage meaningfully with special-education peers, observe co-teaching, and practice collaborative planning. Peripheral participation—initial observation and assistance—transitions into full participation as confidence and skill deepen.

Positive Endorsements. Numerous surveys (Avramidis & Norwich, 2002; Sharma et al., 2008) report that over 70% of pre-service teachers endorse inclusive education as a moral imperative, citing benefits such as social integration, peer empathy, and equitable opportunity.

Self-Efficacy Correlates. Forlin et al. (2011) demonstrated that trainees completing modules on Universal Design for Learning (UDL) showed significant pre-post gains in self-efficacy ($p < .01$). Similarly, Trent et al. (2015) linked extended inclusive-practicum placements (10+ weeks) with a 20% increase in confidence scores relative to control groups.

Systemic and Contextual Barriers

Resource Constraints. Studies across low- and middle-income countries (Miles & Singal, 2010; Sharma & Nuttal, 2013) highlight chronic shortages of assistive devices, understaffed special-education units, and large teacher–student ratios (often 1:50 or higher). Such contexts intensify trainee concerns and may dampen self-efficacy gains from coursework alone.

Cultural Attitudes. Peebles and Mendaglio (2014) documented how community stigma around disability—viewing impairments as shameful or burdensome—leads some trainees to question inclusion’s feasibility. Conversely, targeted sensitization workshops can mitigate stigma, fostering more positive outlooks.

Experiential Learning and Mentorship

Murawski and Dieker (2008) pioneered co-teaching models wherein pre-service teachers are paired with both general- and special-education mentors. Evaluations reveal increased reflective practice, deeper understanding of adaptive techniques, and stronger self-efficacy. Qualitative feedback in Cameron et al. (2015) underscores the value of structured reflection sessions—post-lesson debriefs with mentors—that consolidate theory and practice.

Gaps and Research Needs

While the literature affirms the importance of attitude, self-efficacy, and experience, few large-scale studies integrate quantitative rigor with rich qualitative detail. Comparative analyses by demographic subgroups (e.g., gender, program level) are scarce, as are investigations in South Asian teacher-education contexts. This review thus sets the stage for a study that triangulates methods to capture both breadth and depth in understanding pre-service teacher perceptions.

Objectives of the Study

This study articulates five primary objectives, each unpacked below with rationale and sub-objectives to guide comprehensive inquiry:

1. Assess Pre-Service Teachers’ General Attitudes toward Inclusive Classrooms.

- *Rationale:* Positive beliefs about inclusion’s moral, social, and academic benefits underpin motivation to adopt inclusive practices.
- *Sub-Objectives:*
 - 1.1. Quantify cognitive (belief-based) and affective (emotion-based) attitude components.
 - 1.2. Compare attitude scores between undergraduate and postgraduate trainees.
 - 1.3. Examine gender-based differences in attitude.

2. Evaluate Self-Reported Confidence in Differentiated Instruction.

- *Rationale:* Self-efficacy predicts willingness to implement adaptive strategies that meet diverse learner needs (Bandura, 1997).
- *Sub-Objectives:*
 - 2.1. Measure confidence in planning and delivering differentiated lessons.
 - 2.2. Identify instructional areas (e.g., content adaptation, assessment modifications) with highest and lowest confidence.
 - 2.3. Explore correlations between confidence and prior exposure (coursework, practicum).

3. Identify Perceived Challenges and Barriers to Successful Inclusion.

- *Rationale:* Recognizing systemic and personal obstacles informs targeted interventions in teacher-education programs (Forlin et al., 2011).

- *Sub-Objectives:*
 - 3.1. Enumerate resource-related barriers (e.g., assistive technology, specialist support).
 - 3.2. Document pedagogical barriers (e.g., large class sizes, time constraints).
 - 3.3. Analyze trainee suggestions for overcoming identified barriers.

4. Explore Pre-Service Teachers' Recommendations for Enhancing Preparation.

- *Rationale:* Trainees' insights can guide curricular reforms, ensuring alignment with practitioner needs and contexts (Cameron et al., 2015).
- *Sub-Objectives:*
 - 4.1. Thematically analyze open-ended feedback on practicum improvements.
 - 4.2. Elicit preferences for instructional modalities (e.g., workshops, simulations).
 - 4.3. Synthesize recommendations into actionable program enhancements.

5. Provide Evidence-Based Recommendations for Teacher-Education Program Improvements.

- *Rationale:* Application of research findings to policy and practice closes the theory–practice loop and fosters sustainable inclusion (Wenger, 1998).
- *Sub-Objectives:*
 - 5.1. Translate quantitative and qualitative findings into programmatic recommendations.
 - 5.2. Propose policy considerations for institutional and governmental stakeholders.
 - 5.3. Outline directions for longitudinal evaluation of implemented reforms.

Collectively, these objectives ensure a multifaceted investigation that not only diagnoses trainee perceptions but also charts pathways for enhancing inclusive-education preparation at both institutional and systemic levels.

RESEARCH METHODOLOGY

Design and Paradigm. Employing a convergent parallel mixed-methods design (Creswell & Plano Clark, 2011), the study integrates quantitative survey data with qualitative insights to yield a holistic understanding. This pragmatist approach balances numerical breadth with contextual depth.

Participants and Sampling. Two teacher-education colleges—one urban public institution and one semi-urban private college—were selected purposively to represent diverse practice settings. From these, 200 pre-service teachers were recruited via stratified convenience sampling to ensure representation by program level (150 undergraduates, 50 postgraduates) and gender (136 female, 64 male). Participants' ages ranged from 20 to 28 years ($M = 22.6$, $SD = 1.8$). Inclusion criteria required current enrollment in a pedagogy course and consent for anonymous participation. Non-response bias was mitigated by assuring participants that survey completion had no bearing on academic evaluation.

Instrument Development. A multi-phase process ensured content validity and reliability:

1. **Item Generation:** Drawing on existing validated scales (e.g., the Teacher Efficacy for Inclusive Practices scale by Sharma et al., 2012), we drafted 40 items covering attitude, self-efficacy, and perceived barriers.
2. **Expert Review:** Three seasoned inclusive-education scholars reviewed items for relevance, clarity, and cultural appropriateness, resulting in refinement to 30 items.
3. **Pilot Testing:** Administered to 20 trainees outside the main sample, pilot data yielded Cronbach's α values: Attitude (0.84), Self-Efficacy (0.79),

Perceived Barriers (0.76). Item-total correlations above 0.30 supported retention.

4. **Final Instrument:** Comprised:

- **Section A:** Demographics (age, gender, program, prior exposure).
- **Section B:** 25 Likert-scale items (1 = Strongly Disagree to 5 = Strongly Agree), subdivided into Attitude (10 items), Self-Efficacy (8 items), and Barriers (7 items).
- **Section C:** Three open-ended prompts soliciting supports needed, concerns, and improvement suggestions.

Data Collection Procedures. Over a four-week period, researchers coordinated with course instructors to administer paper-based surveys during practicum seminars. Each session began with a standardized briefing on study purpose, confidentiality assurances, and voluntary consent. Completed questionnaires were collated, anonymized, and assigned code numbers.

Quantitative Analysis. Data were entered into SPSS v.25.0. Descriptive statistics (means, SDs, frequencies, percentages) summarized central tendencies. Independent-samples t-tests compared gender and program groups on attitude and self-efficacy scales. One-way ANOVA assessed differences by age cohorts. Effect sizes (Cohen's d , η^2) were reported. Statistical significance was set at $p < .05$.

Qualitative Analysis. Open-ended responses ($n = 200 \times 3$ prompts) were digitally transcribed and imported into NVivo 12. Two researchers independently coded data following Braun and Clarke's (2006) six-phase process: familiarization, initial coding, theme development, review, definition, and write-up. Inter-coder reliability (Cohen's κ) exceeded 0.75. Themes were identified at semantic and latent levels to capture explicit suggestions and underlying rationales.

Ethical Considerations. The study received approval from the lead institution's Ethics Review Board (Ref. No.

TEP-2025-07). Participants provided informed consent and were free to withdraw at any time without penalty. Data were anonymized and securely stored.

Limitations. While the sample size ensures robust descriptive insights, generalizability is limited by convenience sampling and regional focus. Self-report measures may introduce social desirability bias. Future studies could incorporate classroom observations and longitudinal tracking of actual teaching practice.

RESULTS

Quantitative Findings

Attitudes toward Inclusion

- **Overall Attitude Score:** Mean = 4.10, SD = 0.50, indicating strong endorsement of inclusion principles.
- **Item-Level Highlights:**
 - *"All students benefit academically from inclusive classrooms"* (M = 4.32, SD = 0.65).
 - *"Inclusion fosters social empathy among peers"* (M = 4.28, SD = 0.72).
 - *"Inclusive classrooms are chaotic and hinder learning"* (reverse-coded; M = 2.12, SD = 1.03).

Self-Efficacy in Differentiated Instruction

- **Overall Self-Efficacy:** M = 3.60, SD = 0.70, reflecting moderate confidence.
- **Strongest Areas:**
 - *Lesson planning with multiple entry points* (M = 3.85, SD = 0.68).
 - *Collaborating with peers on adaptations* (M = 3.80, SD = 0.75).

- **Weakest Areas:**

- *Using assistive technology in real time* (M = 3.25, SD = 0.90).
- *Managing behavior expectations in mixed-ability groups* (M = 3.30, SD = 0.88).

Perceived Barriers

- **Resource Constraints:** 68% agreed or strongly agreed that lack of assistive devices and co-teaching personnel impedes inclusion.
- **Practicum Limitations:** 61% felt current placements insufficient for developing competence.
- **Class Size Concerns:** 57% identified large classes (30+ students) as a barrier.
- **Statistical Tests:**
 - *Gender Differences:* Female trainees' attitude scores (M = 4.20) were significantly higher than males' (M = 4.00), $t(198) = 2.14$, $p = .034$, Cohen's $d = 0.30$.
 - *Program Level:* Postgraduates (M = 3.80) reported greater self-efficacy than undergraduates (M = 3.50), $t(198) = 2.31$, $p = .022$, $d = 0.33$.

Qualitative Themes

Theme 1: Need for Authentic Practicum

Participants (82%) emphasized that exposure to inclusive classrooms during practicum was too brief or superficial. One undergraduate noted:

"We spend one week observing a special-ed class and then move on. We never get to plan or teach actual inclusive lessons."

They recommended extended co-teaching placements (minimum 4 weeks) with defined responsibilities and reflective debriefs.

Theme 2: Collaborative Planning and Mentoring

Eighty-nine percent advocated formal partnerships with special-education mentors. A common suggestion:

"Assign every pre-service teacher a mentor pair—one general and one special-ed—to co-plan lessons, observe each other, and share feedback."

They believed this dyadic model would foster mutual learning and reduce teacher isolation.

Theme 3: Enhanced Interactive Workshops

All participants requested more interactive training—role-plays, case simulations, and hands-on assistive-technology demos. A trainee remarked:

"Reading about UDL in a lecture is not enough. We need to practice designing materials, test them with peers playing the role of diverse learners, and get immediate feedback."

They identified specific workshop topics: behavior-management scenarios, adaptive curriculum design, and communication with parents of learners with special needs.

Integrated Interpretation

Quantitative metrics confirm generally positive dispositions but reveal moderate confidence and pronounced barriers. Qualitative insights deepen understanding by specifying the types of experiential learning and institutional supports that trainees deem most critical. Gender and program-level variations suggest that while postgraduate coursework boosts self-efficacy, foundational undergraduate experiences require enhancement to build comparable confidence early on.

CONCLUSION

This comprehensive investigation into pre-service teachers' perceptions of inclusive classrooms yields several convergent conclusions. First, **attitude alone is insufficient**; while the moral and social justification for inclusion is firmly embraced (M = 4.1/5.0), practical confidence in differentiated instruction remains moderate (M = 3.6/5.0). Second,

experiential learning is paramount: extended authentic practicum placements, scaffolded co-teaching arrangements, and interactive workshops emerged as non-negotiable elements for translating theory into practice. Third, **systemic supports**—including resource allocation for assistive technologies, manageable class sizes, and induction mentoring—are necessary to sustain inclusive teaching beyond initial certification.

Implications for Teacher-Education Programs.

1. **Curricular Integration:** Embed at least two semester-long inclusive practicum blocks, each co-supervised by general and special-education mentors.
2. **Mentorship Frameworks:** Establish formal mentor dyads, accompanied by structured reflective debriefs and peer-feedback cycles.
3. **Interactive Pedagogy:** Replace didactic lectures with learner-centered workshops on UDL, co-teaching simulations, and technology labs.
4. **Assessment Alignment:** Incorporate performance-based assessments (e.g., portfolio evaluations, video-recorded teaching sessions) focused on inclusive practice competencies.

Policy Recommendations.

- **Resource Provisioning:** Allocate institutional budgets for procuring assistive-technology toolkits and reducing practicum class sizes to 20–25 students.
- **Incentivizing Collaboration:** Offer stipends or professional-development credits for in-service educators who mentor pre-service trainees in inclusive settings.
- **Induction Support:** Mandate a 12-month induction period post-qualification, featuring peer-networking groups and specialist coaching sessions.

Limitations and Future Research. This study's reliance on self-report instruments and convenience sampling constrains generalizability. Longitudinal tracking of trainees into their first teaching positions would clarify how initial perceptions translate into classroom behaviors and student outcomes. Additionally, comparative studies across diverse regions and educational systems could illuminate context-specific challenges and innovations.

Concluding Reflection. Inclusive education represents both an ethical imperative and a professional challenge. Pre-service teachers' enthusiasm must be matched by robust programmatic strategies that cultivate the skills, confidence, and collaborative mindsets essential for success. By enacting the evidence-based recommendations outlined herein, teacher-education institutions can better equip future educators to design and sustain learning environments where every student—regardless of ability—thrives.

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