

PRE-SERVICE TEACHERS' ATTITUDES TOWARD INCLUSIVE EDUCATION: IMPACT OF EXPOSURE TO INCLUSIVE EDUCATION

^{1*}Vernon Jeffery S. Ponce, ²Jeremy Adrian D. Guiang, & ³May Flor C. Rivera

^{1*2,3} *Mariano Marcos State University, College of Teacher Education, Laoag Campus, Philippines*

[*vsponce@mmsu.edu.ph](mailto:vsponce@mmsu.edu.ph)

ABSTRACT

This qualitative study examined how field-based experiences influence pre-service teachers' attitudes and preparedness for inclusive education. Conducted with 321 pre-service teachers at a Philippine teacher education institution, the research explored how exposure to inclusive teaching strategies, direct classroom engagement, and limited access to assistive technologies shaped their professional growth. Thematic analysis revealed a clear progression from initial uncertainty and limited understanding to increased confidence, empathy, and commitment to inclusive practice. Key themes included transformative learning experiences, post-exposure attitudinal shifts, development of inclusive teaching strategies, and professional growth. While field experience and reflective practice proved central to attitudinal change, participants also identified a lack of preparation in using assistive technologies. These findings support the value of experiential learning in teacher education and highlight the need to integrate inclusive technologies into pre-service training. The study recommends embedding structured fieldwork, reflective practice, mentorship, and assistive technology modules in teacher preparation programs to promote inclusive competence.

Keywords: inclusive education, pre-service teachers, teacher preparation, transformative learning, professional development

INTRODUCTION

Inclusive education, a foundation of equitable and high quality schooling, strives to provide all students with equal opportunities to learn and thrive, irrespective of their diverse needs and abilities. Over the past three decades, this fundamental principle has driven a significant global movement. This movement has been supported by numerous declarations from United Nations agencies that encourage countries worldwide to reform educational policies and promote inclusive practices (UNESCO, 2009). Central to realizing this ideal are the attitudes and preparedness of teachers, as these factors directly shape classroom experiences and student outcomes (Yusoff & Farhan, 2021).

Pre-service teachers' attitudes toward inclusive education are shaped by personal experiences, previous schooling, and formal preparation (Varcoe and Boyle, 2013), making teacher education programs a critical space for transformation. Many studies have shown that exposure to inclusive practices can promote positive shifts in beliefs and teaching approaches (Weber and Greiner, 2019). However, the effectiveness of this exposure depends greatly on its depth and context.

For instance, Booth and Ainscow (2002) emphasize that supportive school environments and inclusive values help shape favorable attitudes, while Börnert-Ringleb et al. (2020) argue that deep reflection and guided practice are necessary to overcome persistent misconceptions. This contrast highlights a broader issue in the literature: while exposure is generally viewed as beneficial, there is less agreement on what type of exposure yields lasting attitudinal change. Some studies appear to assume that direct interaction with diverse learners is sufficient (Weber and Greiner, 2019), whereas others caution that without structured reflection or theoretical grounding, these experiences may fail to disrupt underlying biases (Börnert-Ringleb et al., 2020).

These findings suggest that observation alone is insufficient to shift deep-seated attitudes. While exposure may raise awareness, meaningful change appears contingent on structured reflection and contextual relevance, factors often underemphasized in traditional practicum models. This limitation, assuming all exposure leads to transformation, reflects a gap in both research design and interpretation.

The structure and delivery of teacher education programs also influence the development of inclusive attitudes. While Rojo Ramos and colleagues (2020) emphasize the value of continuous professional learning, their work primarily focuses on knowledge transmission through formal instruction. In contrast, Tatal and Yazar (2022) argue that collaborative, problem-solving approaches foster more meaningful attitudinal change.

Here, a key tension emerges: should inclusive mindsets be cultivated through explicit content (such as lectures and modules), or through embedded, socially situated learning? The former risks becoming overly theoretical, while the latter may lack coherence without structured guidance. Few studies reconcile this divide or explore how these methods might be integrated for greater effect.

This divergence highlights an unresolved tension in the literature whether sustainable inclusive mindsets are best developed through structured content delivery or through socially situated, experiential learning. Few studies critically evaluate how these models interact with real classroom practice, particularly in low-resource contexts. These contrasting views highlight the importance of not just what is taught, but how it is taught. Additionally, Taylor and Dart (2022) point out that institutional culture, mentorship, and access to relevant resources are key factors in shaping teacher beliefs. Despite this, there is limited research examining how institutional factors interact with pedagogical design, an omission that weakens our understanding of the systemic nature of teacher preparation. These insights reinforce the idea that meaningful change requires attention to context, instructional design, and support systems, not only curriculum content.

One important yet often overlooked area in teacher preparation is the use of assistive and inclusive technologies. Tools such as screen readers, communication applications, and adaptive learning software are essential for creating accessible classrooms (Rose and Dalton, 2009). Despite their pedagogical importance, assistive technologies are often treated as peripheral topics in teacher education programs, particularly in the Philippines. In Malaysia only 25% of teacher education programs incorporate structured assistive technology training (Sharma & Vlcek, 2021), a trend mirrored in the Philippines. This reflects a broader disconnect between inclusion policy and teacher preparation practice. While Al Azawei et al. (2016) found that integrating technology with inclusive design increases teacher confidence, there remains limited empirical work on how such training affects pre-service attitudes and actual readiness. This oversight is particularly troubling given the increasing digitization of education. With growing recognition of the importance of inclusive education, there is still limited empirical understanding of how exposure to inclusive teaching strategies, classroom experience, and the use of assistive technology collectively shape pre-service teachers' attitudes and teaching competencies. While previous studies acknowledge the value of practical experience (Booth and Ainscow, 2002; Billett, 2014) and inclusive instructional approaches (Rojo-Ramos et al., 2020), these areas are often studied in isolation or without a clear focus on the Philippine context.

Despite the increasing focus on inclusive education, major gaps remain in how its core components, pedagogical strategies, experiential fieldwork, and assistive technology, are integrated into teacher education, particularly in Southeast Asian settings like the Philippines and Malaysia. Much of the literature investigates these elements in isolation, which limits our understanding of their combined effect on pre-service teachers' beliefs and competencies. Moreover, existing research tends to underemphasize the challenges of applying inclusive pedagogy in low-resource environments where institutional, cultural, and technological barriers persist. This study seeks to bridge these gaps by providing empirical evidence on how integrated exposure to inclusive practices influences teacher preparation in a Philippine context.

This study addresses this gap by investigating how a combination of teaching strategies, real classroom experience, and exposure to inclusive technologies influences the attitudes and preparedness of pre-service teachers. It contributes new insights from a university recognized for excellence in teacher education and its commitment to inclusive practice.

Statement of the Problem

In response to the limited research on how teaching strategies, practical classroom exposure, and inclusive technologies influence teacher preparation, this study explored the effects of these experiences on pre-service teachers' attitudes and professional readiness. It focused on how these elements contribute to the development of inclusive teaching skills within a teacher education institution in the Philippines. Specifically, this study sought to answer the following questions:

1. What were pre-service teachers' attitudes toward inclusive education, and how did they change after exposure to inclusive teaching strategies?
2. How did field experience in inclusive classrooms enhance pre-service teachers' knowledge and skills?

Significance of the Study

The findings of this study provided valuable insights into how pre-service teachers' attitudes toward inclusive education evolved through exposure to inclusive teaching strategies, practical field experiences, and assistive technologies. By examining these areas, the study contributes to a deeper understanding of the factors that shape pre-service teachers' readiness to implement inclusive practices with confidence and competence.

The results offer concrete implications for teacher educators and program designers. Specifically, they highlight the need to embed inclusive education principles across the teacher education curriculum, enhance the quality and consistency of field-based learning experiences, and integrate training on assistive and inclusive technologies. Addressing these areas will better prepare pre-service teachers for diverse, technology-integrated classroom environments.

Additionally, the study provides evidence that can inform the development of more effective instructional strategies, mentorship models, and professional development programs—both for those entering the profession and for in-service teachers. Ultimately, these improvements will foster the creation of equitable, supportive, and inclusive learning environments for all learners, thereby contributing to a more just and responsive education system. Findings from this Philippine-based research may inform inclusive teacher preparation in similarly structured Southeast Asian contexts

METHODOLOGY

This section details the methodology employed in this study, including the theoretical framework, research design, locale, participant selection, data collection methods, and data analysis techniques.

Theoretical Framework

This qualitative study uses Transformative Learning Theory (TLT), as developed by Jack Mezirow (1991), to examine how pre-service teachers' attitudes toward inclusive education change. The study was conducted at Mariano Marcos State University – College of Teacher Education (MMSU-CTE), a recognized Center of Excellence in teacher education in the Philippines. TLT's emphasis on the constructivist nature of learning, focusing on how individuals interpret experiences to create meaning, makes it particularly relevant to this

research.

Transformative learning, according to Mezirow, stems from critical reflection on experiences that can fundamentally shift an individual's perspective. This process often begins with a "disorienting dilemma" that challenges established beliefs. In this study, pre-service teachers' exposure to inclusive teaching strategies serves as this disorienting dilemma. Their interactions with diverse learners and inclusive methods may prompt them to critically examine their assumptions about ability, disability, and equitable education.

Conceptual Framework

This study employed the Input-Process-Output (IPO) model to guide the investigation of pre-service teachers' evolving attitudes toward inclusive education. The input consisted of pre-existing attitudes and beliefs, shaped by personal experiences, prior educational background, and exposure (or lack thereof) to inclusive educational technologies. The process involved both theoretical learning (through coursework incorporating Transformative Learning Theory—TLT) and practical application (through field experiences in inclusive classrooms and engagement with inclusive digital tools and assistive technologies). The interaction between these two aspects was central to the study. The output assessed the resulting shift in attitudes, focusing on changes in confidence, skills, and perspectives on inclusive pedagogical approaches.

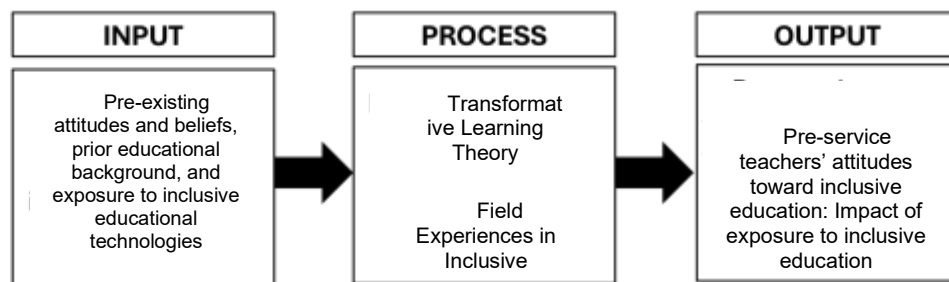


Figure 1. Schematic Diagram showing the Conceptual Framework of the Study.

Research Design

It is descriptive in nature, employing a qualitative approach to thematically analyze the attitudes of 321 pre-service teachers toward inclusive education. The thematic analysis allowed for a rich exploration of the complexities of attitudinal shifts and the impact of practical experience on pre-service teachers' understanding and capabilities within inclusive educational settings.

Locale of the Study

This qualitative study was conducted at the Mariano Marcos State University – College of Teacher Education (MMSU-CTE), a recognized Center of Excellence in Teacher Education, located in Laoag City, Ilocos Norte, Philippines. The 321 pre-service teacher participants were enrolled in MMSU-CTE's Bachelor of Early Childhood Education (BECEd) and Bachelor of Special Needs Education (BSNEd) programs. MMSU-CTE was selected as the study site due to its established reputation for excellence in teacher education and its commitment to inclusive practices. The use of the MMSU-Laboratory Elementary School (MMSU-LES) and the MMSU-Center for Inclusive Early Childhood Education (CIECE) as observation and

practicum sites for BECEd and BSNEd students provided a rich context for investigating attitudinal shifts toward inclusive education among pre-service teachers.

Population and Sampling Procedure

The study population comprised pre-service teachers enrolled in the Bachelor of Early Childhood Education (BECEd) and Bachelor of Special Needs Education (BSNEd) programs at the Mariano Marcos State University – College of Teacher Education (MMSU-CTE) who had completed or were currently enrolled in the "Foundations of Special and Inclusive Education" course. Purposive sampling was employed to select 321 participants. This sample size was deemed sufficient to provide rich qualitative data for analysis and capture diverse perspectives on inclusive education. Inclusion in the study required enrollment in the specified course at MMSU-CTE, ensuring participants had direct exposure to the relevant subject matter.

Research Instruments

Data were collected using a researcher-developed questionnaire designed to assess pre-service teachers' attitudes toward inclusive education and the impact of inclusive teaching strategies and field experiences. The questionnaire, validated by two experts in educational research and inclusive practices, included both closed-ended and open-ended questions. Closed-ended questions explored beliefs about students with disabilities, perceptions of inclusive teaching, and confidence in implementing inclusive practices. Two open-ended questions elicited participants' reflections on their evolving perspectives and the practical application of their learning, providing rich qualitative data.

Data Gathering Procedure

Following approval from the Early Childhood and Special Needs Education Department (ECSNED) chair at MMSU-CTE and the instructors of the "Foundations of Special and Inclusive Education" course, questionnaires were administered to participants in their preferred language. Prior to participation, informed consent was obtained from each participant, who were fully informed of their right to withdraw at any time and to omit any questions. Data analysis involved thematic analysis, a rigorous process of coding, identifying themes, and interpreting the data. Following the completion of the study, all data—including printed materials and electronic files—were securely destroyed in accordance with the Data Privacy Act of 2012 to ensure participant confidentiality and anonymity.

Analysis of Data

Thematic analysis followed Braun and Clarke's (2006) six-phase framework: familiarization with data, generation of initial codes, theme searching, theme review, theme definition and naming, and final reporting. The researchers used an inductive approach to allow patterns to emerge organically from the responses rather than applying a preexisting codebook.

To ensure credibility, two researchers independently coded a subset of the open-ended responses and compared their initial codes. Intercoder agreement was calculated using simple percentage agreement and reached 87 percent after the second round of coding. Discrepancies were discussed until consensus was achieved. A shared codebook was then developed and refined iteratively throughout the analysis process to maintain

consistency.

The final themes were organized hierarchically, with broader categories such as “Professional Growth” or “Transformative Experience” encompassing more specific subthemes like “increased empathy,” “confidence in managing inclusive classrooms,” or “development of differentiated instruction.” These themes were validated through constant comparison across multiple responses, ensuring they accurately represented the collective experience of the participants. This systematic approach allowed for a rich, trustworthy interpretation of how pre-service teachers’ attitudes and competencies evolved during their inclusive education exposure.

DISCUSSIONS, RECOMMENDATIONS, AND CONCLUSIONS

Results and Discussions

To investigate the attitudes of the pre-service teachers toward inclusive education, the researchers followed San Jose’s (2019) and Torres’s (2020) methods in presentation. The findings were placed into three-column table. The first column contains the major themes drawn from the feedback gathered. The classifications of the themes were General, Typical, and Variant. If the responses compose of fifty (50) percent and above, it is classified as general, typical if it is twenty-one (21) to forty-nine (49) and variant if it is twenty (20) percent or less.

Table 1. Themes and core ideas on pre-service teachers’ attitudes toward inclusive education, and how do they change after exposure to inclusive teaching strategies

Major Theme	Core Ideas	Frequency of Responses
A. Initial Attitudes	- Uncertainty and apprehension about implementation	General
	- Limited understanding of inclusive practices	Typical
	- Concerns about managing diverse learning needs	General
	- Unconscious biases about students with disabilities	General
	- Mixed feelings about effectiveness	Typical
B. Transformative Experiences	- <i>Exposure to practical teaching strategies led to perspective shifts</i>	General
	- <i>Hands-on experience increased confidence</i>	General
	- <i>Understanding deepened through field observations</i>	General
	- <i>Direct interaction with diverse learners enhanced appreciation</i>	Typical
	- <i>Professional development improved implementation skills</i>	General
C. Post-Exposure Attitudes	- <i>Greater appreciation for diversity in learning</i>	General
	- <i>Increased confidence in ability to implement inclusive practices</i>	General
	- <i>Stronger belief in benefits for all students</i>	General
	- <i>More positive outlook on classroom management</i>	General
	- <i>Enhanced understanding of differentiated instruction</i>	General
	- impact on physical, cognitive/intellectual, and socio-emotional development	General

	- observed improvements in specific skills or behaviors	Typical
	- overall developmental progress.	General
D. Key Realizations	- <i>Inclusive education benefits the entire classroom community</i>	General
	- <i>Strategies are adaptable and practical</i>	General
	- <i>Support systems are essential for success</i>	General
	- <i>Individual differences enrich the learning environment</i>	General
	- <i>Equal opportunities promote better outcomes</i>	General
E. Professional Growth	- <i>Development of empathy and patience</i>	General
	- <i>Enhanced teaching flexibility</i>	General
	- <i>Improved classroom management skills</i>	Typical
	- <i>Better understanding of diverse learning needs</i>	General
	- <i>Increased commitment to equity in education</i>	General

Initial Attitudes Toward Inclusive Education

Pre-service teachers entered the program with varying degrees of apprehension, often stemming from limited exposure to inclusive practices. The theme of “Initial Attitudes” in Table 1 reflects widespread uncertainty regarding the implementation of inclusion, especially in managing the complex needs of diverse learners. General responses indicated that unconscious biases and perceived limitations in skill or knowledge contributed to mixed feelings about the effectiveness of inclusive teaching. Typical responses revealed an underdeveloped understanding of what inclusion truly entails. These findings align with Chow (2023), who emphasized that such attitudes are typically shaped by personal educational experiences and a lack of prior structured engagement with disability-focused pedagogy. Without early exposure or training, pre-service teachers often default to deficit-based thinking, seeing diversity as a challenge rather than an opportunity.

Transformative Experiences During Exposure

The theme “Transformative Experiences” captures the significant change that occurred when participants engaged in authentic, practice-based learning environments. Through observation, co-teaching, and hands-on work with learners of differing abilities, pre-service teachers gained confidence and clarity. General responses from the data reflected a consistent narrative: practical experience in inclusive classrooms had a direct impact on participants’ teaching beliefs and efficacy. Teachers noted deeper understanding developed through field observations and recognized how exposure to actual learner variability moved inclusion from concept to reality. These findings reinforce earlier work by Booth and Ainscow (2002) and Dudhade (2019), who argued that immersive learning experiences help deconstruct biases and build competency. Such transformative experiences are also in line with Mezirow’s (1991) theory of transformative learning, wherein reflection on meaningful encounters triggers lasting change in perspective.

Post-Exposure Attitudes and Emerging Confidence

Following their engagement in inclusive fieldwork, pre-service teachers reported widespread improvement in attitudes toward inclusive education. As presented in the “Post- Exposure Attitudes” theme, participants expressed stronger beliefs in the benefits of inclusion—not only for students with disabilities but for all learners. They reported improved self-efficacy, classroom management abilities, and deeper appreciation for differentiated instruction. These

general frequency responses demonstrate the impact of guided practice and sustained exposure in reinforcing inclusive values. Importantly, participants noted observable improvements in students' physical, cognitive, and socio-emotional development, suggesting a direct link between inclusive strategies and holistic learner outcomes. These findings mirror those of Börnert-Ringleb et al. (2020) and Savolainen et al. (2020), who documented similar shifts in teacher confidence and outlook after exposure to inclusive pedagogies. The shift in tone from fear or confusion to competence and advocacy marks a pivotal transformation in the professional mindset.

Key Realizations About Inclusion

As participants reflected on their experience, a set of “Key Realizations” emerged, revealing a deeper philosophical and pedagogical understanding of inclusive education. Most notably, teachers recognized that inclusion is not merely about accommodating learners with disabilities but about creating classrooms that are responsive to all learners. General responses emphasized that inclusive education benefits the entire classroom community by fostering collaboration, empathy, and equity. Many reported newfound beliefs that individual differences enrich the learning environment and that equitable access to instruction leads to better outcomes for all students. The recognition of the importance of systemic support—such as mentoring, school-wide values, and access to resources—was also central to their realizations. These insights are consistent with Kreitman (2022) and Bernard (2019), both of whom argue that effective inclusion depends as much on context and systems as it does on teacher competence.

Professional Growth and Teaching Dispositions

The next theme, “Professional Growth,” captures the long-term implications of exposure to inclusive settings for teacher development. General responses revealed that participants experienced growth not only in their technical teaching abilities but also in their personal dispositions. They reported improvements in empathy, patience, adaptability, and their capacity to manage complex classrooms. Many also described a stronger sense of purpose and increased commitment to educational equity. These findings are aligned with those of Muñoz-Oliver (2022) and Drame (2021), who emphasize that effective inclusive educators must develop emotional intelligence alongside instructional competence. Participants' evolving perspectives indicate that inclusive field experiences foster the kind of reflective practice necessary for long-term professional engagement and resilience in diverse educational environments.

Gaps in Technology Use: A Missed Opportunity

A notable weakness reported by participants was the limited integration of assistive technologies in their training. Despite recognizing the value of tools like screen readers or adaptive software, many felt unprepared to implement them. This aligns with Edyburn (2013), who emphasized the risks of excluding technology from inclusive training. This suggests a systemic gap in teacher education that must be addressed if future educators are to be fully prepared for tech-integrated inclusive classrooms.

There is a consistent pattern in pre-service teachers' attitudes toward inclusive education. Initially marked by uncertainty and limited exposure, these attitudes evolve significantly through transformative learning experiences. Field based practice and structured training contribute to increased confidence, deeper pedagogical understanding, and improved instructional flexibility. Post exposure, teachers express a stronger appreciation for learner

diversity, higher efficacy in inclusive practice, and a clearer sense of professional purpose. This evolution, anchored in empathy, reflection, and practice, ultimately leads to better teaching competencies and more inclusive learning environments.

Table 2. Themes and core ideas on pre-service teachers' knowledge and skills after the exposure on field experience in inclusive classrooms.

Major Theme	Core Ideas	Frequency of Responses
A. Enhanced Initial Attitudes	- Recognition of teaching challenges in inclusive settings	General
	- Awareness of diverse student needs	General
	- Understanding the importance of professional development	General
	- Acknowledgment of initial uncertainties	General
B. Transformative Experiences through Field work	- Increased confidence in teaching diverse learners	General
	- Greater empathy and understanding	General
	- Stronger commitment to inclusive education	General
C. Post-Exposure Attitudes	- Enhanced understanding of diverse learning needs	General
	- Development of practical teaching strategies	General
	- Improved confidence in managing inclusive classrooms	General
	- Growth in empathy and patience	General
	- Increased positive outlook toward inclusive education	General
	- Greater appreciation for student diversity	General
	- Strengthened commitment to inclusive practices	General
D. Skill Enhancement	- Enhanced belief in student capabilities	
	- Practical application of inclusive strategies	General
	- Development of classroom management techniques	General
	- Improved ability to adapt teaching methods	General
E. Professional Growth	- Acquisition of differentiated instruction techniques	General
	- Enhanced classroom management abilities	General
	- Improved collaboration skills	General
	- Development of adaptive teaching methods	General

Enhanced Initial Attitudes: Recognizing the Realities of Inclusive Classrooms

The data from Table 2 indicate that pre-service teachers began their field experiences with a heightened awareness of the complexities of inclusive education. Their exposure to real-world settings brought to light the multifaceted challenges of addressing diverse student needs. Many participants acknowledged an initial uncertainty in navigating inclusive classrooms but reported a growing recognition of the importance of professional development in responding effectively to those challenges. These responses were classified as "general" in frequency, revealing a common experience of initial hesitation that evolved into constructive awareness.

These findings align with Triviño-Amigo et al. (2023), who assert that early and meaningful exposure to diverse educational settings is crucial for shaping informed, context-sensitive understandings of inclusive practice.

Transformative Experiences through Field Work: From Theory to Confident Practice

Participants' reflections reveal that their practicum experiences were instrumental in developing a stronger sense of agency and clarity in teaching diverse learners. The responses show that fieldwork not only improved their confidence but also nurtured a deeper empathy for students with different learning profiles. Engagement in inclusive classroom settings led to a clearer understanding of how to respond to learners' individual needs and promoted a stronger internal commitment to inclusive education. These core ideas, categorized under "general" frequency, affirm the transformational impact of hands-on teaching experiences. This supports Booth and Ainscow (2002), who emphasized that experiential learning plays a vital role in shaping inclusive teaching practices through structured exposure and reflective engagement.

Post-Exposure Attitudes: Strengthening Inclusive Commitments

After their immersive field experiences, participants expressed comprehensive positive shifts in their attitudes toward inclusive education. The responses showed a generalized growth in their understanding of diverse learning needs and a clearer capacity to implement responsive teaching strategies. There was also a marked improvement in their confidence to manage inclusive classrooms and a significant development in the areas of empathy and patience. These pre-service teachers reported a more optimistic outlook on inclusive teaching and, most notably, an enhanced belief in the abilities of students with disabilities. Recognizing the strengths and potential of all learners shifted their views from deficit-oriented assumptions to more empowering perspectives. The frequency of these responses being categorized as "general" highlights the depth and consistency of attitudinal transformation, supporting findings by Charitaki et al. (2022), who noted similar attitudinal improvements after inclusive field exposure.

Skill Enhancement: Applying Inclusive Pedagogical Strategies

Field experiences also facilitated significant growth in the acquisition and application of inclusive teaching skills. Participants reported the practical use of inclusive strategies during their fieldwork, noting consistent development in classroom management techniques and the ability to adapt teaching methods for learners with varying needs. These competencies reported with general frequency demonstrate that the practicum environment provided an essential testing ground for the theoretical knowledge gained in their coursework. This resonates with Lindner et al. (2021), who assert that practical experience enhances a teacher's ability to manage diverse classrooms and respond flexibly to students' academic needs.

Professional Growth: Toward Reflective and Adaptive Teaching

The theme of professional growth was strongly evident in the responses, with all corresponding core ideas classified as general in frequency. Participants reported that they had acquired differentiated instruction techniques and significantly enhanced their classroom management and collaborative abilities. More importantly, they described growth in adaptive teaching practices that allowed them to adjust content, pacing, and strategies based on individual student profiles. These outcomes demonstrate not only the participants'

pedagogical growth but also their emergence as reflective practitioners committed to continuous improvement. As Bernard (2019) and Taylor and Dart (2022) note, inclusive education demands sustained professional learning, collaboration, and emotional preparedness to ensure high-quality teaching in diverse settings.

Field experiences in inclusive classrooms significantly improve pre-service teachers' attitudes and instructional competencies. Initial exposure enhances their understanding of learner diversity and the complex realities of inclusive teaching. Through direct engagement, participants build confidence, develop empathy, and acquire practical skills in classroom management, differentiated instruction, and adaptive teaching. These experiences result in positive shifts in attitudes, deeper professional reflection, and a stronger commitment to inclusive education. Ultimately, field immersion fosters the growth of collaborative, flexible, and equity-driven educators prepared to meet the needs of all learners.

Conclusion

This study confirms that field experiences are a powerful catalyst for transforming pre-service teachers' attitudes and competencies toward inclusive education. In line with Mezirow's Transformative Learning Theory, hands-on exposure to inclusive classrooms fostered critical reflection, strengthened empathy, and reshaped participants' beliefs about learner diversity. These experiences bridged the gap between theory and practice, resulting in greater confidence, adaptability, and commitment to inclusive teaching. To prepare future educators effectively, teacher education programs must integrate experiential learning as a central strategy. Further research is needed to explore the long-term effects of these transformations on classroom practices and student outcomes.

Recommendations

Based on the study's findings, the following recommendations are proposed to strengthen the preparation of pre-service teachers for inclusive education:

- 1. Expand Field Experience in Inclusive Settings** - Teacher education programs should provide extended and meaningful field placements in inclusive classrooms. These experiences allow pre-service teachers to work directly with diverse learners and apply inclusive strategies in authentic contexts.
- 2. Integrate Reflective Practice into Training** - Structured opportunities for reflection, such as journaling, peer discussions, and feedback sessions, should be included throughout field placements. Reflective practice encourages deeper self-awareness and helps pre-service teachers make sense of their experiences.
- 3. Establish Mentorship Opportunities** - Pairing pre-service teachers with experienced inclusive educators can offer valuable guidance and support. Mentorship helps bridge the gap between theory and practice and promotes professional confidence.
- 4. Ensure Ongoing Professional Learning** - Professional development related to inclusive education should be offered continuously, not only to pre-service teachers but also to those already in service. Training should be based on current research and include practical strategies that respond to classroom realities.

5. **Prioritize Assistive Technology Integration in Teacher Preparation** - Training on assistive technologies such as screen readers, speech-to-text tools, and adaptive software must move beyond theory and be embedded in both coursework and practicum activities. Pre-service teachers should apply these tools during field placements to support real learners with diverse needs. Faculty and mentors must also receive training to model inclusive technology use effectively. Institutions should conduct resource audits and collaborate with EdTech providers to ensure access to updated tools. These efforts will enhance teacher readiness for technology-integrated inclusive classrooms and directly address current gaps in implementation.

These recommendations highlight the importance of practical experience, reflective learning, and sustained support in developing inclusive teaching practices. Implementing these strategies can help produce a teaching workforce that is better prepared, more confident, and more committed to creating equitable learning opportunities for all students.

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