

Preparing Teachers for Inclusion: A Path Model Examining How Readiness Influences Responses

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Abstract

This study examined how teacher readiness dimensions influence pre-service teachers' emotional responses to inclusive education. A cross-sectional survey was conducted with 255 pre-service teachers at a teacher education university in Taipei. Participants completed the "Readiness and Responses to Inclusive Education Questionnaire" after reading a scenario about teaching students with special needs. Latent variable path analysis examined relationships between three readiness dimensions (Knowledge, Skills, and Attitudinal Readiness) and two response outcomes (Positive Acceptance and Negative Anxiety). Both path models demonstrated excellent fit ($CFI = 0.96$, $RMSEA = 0.06$). Skills Readiness emerged as the strongest predictor of both Positive Acceptance ($\beta = 0.45$, $p < .001$) and reduced Negative Anxiety ($\beta = -0.61$, $p < .001$). Attitudinal Readiness also significantly predicted both outcomes ($\beta = 0.32$ and $\beta = -0.15$, respectively). Knowledge Readiness did not directly predict responses but showed strong correlation with Skills Readiness ($r = 0.79$). Results indicate that practical competencies are more critical than theoretical knowledge in shaping emotional responses to inclusive education. Teacher preparation programs should prioritize skills-based training and experiential learning while addressing attitudes and anxieties about inclusion.

Keywords: inclusive education, teacher readiness, teacher responses, teacher education, pre-service teacher

1. Introduction

The global movement toward inclusive education, as articulated in the UNESCO Salamanca Statement [1], represents a fundamental paradigm shift that calls for schools to welcome all children regardless of ability or background. This transformative approach places unprecedented demands on educators, requiring them to reimagine their pedagogical practices to effectively serve increasingly diverse student populations. In Taiwan, the 2023 revision of the Special Education Act has further reinforced this commitment to inclusive practices, underscoring the pressing need to prepare teachers who can respond positively and confidently to the challenges inherent in inclusive education.

While inclusive education policies are undoubtedly well-intentioned and grounded in principles of equity and social justice, their effective implementation largely depends on teachers' emotional and behavioral responses to inclusive practices. Teacher responses to inclusive education serve as critical determinants of implementation success [2]. When teachers respond positively, they create supportive, nurturing environments that foster meaningful inclusion for all students. Conversely, negative responses often manifest as resistance, avoidance behaviors, or professional burnout, ultimately undermining the very goals these policies aim to achieve. Understanding the complex factors that shape these responses has become essential for developing evidence-based teacher preparation programs that can bridge the gap between policy intentions and classroom realities.

Pre-service teacher readiness has emerged as a pivotal factor influencing their subsequent responses to inclusive education demands. Empirical evidence suggests that educators who enter the profession equipped with comprehensive preparation—encompassing robust knowledge bases, practical skills, and positive attitudes—are significantly more likely to respond favorably when confronted with inclusive education challenges [3]. In stark contrast, inadequately prepared pre-service teachers frequently experience heightened levels of anxiety, professional uncertainty, and resistance when encountering inclusive education scenarios for the first time. This critical connection between readiness and responses illuminates the paramount importance of developing comprehensive teacher preparation programs that systematically address multiple dimensions of readiness in an integrated and coherent manner.

Given these considerations, this study addressed two primary research objectives designed to advance both theoretical understanding and practical application. First, to develop and empirically test path models that illuminate how different dimensions of teacher readiness systematically influence pre-service teachers' emotional and behavioral responses to inclusive education. Second, to provide evidence-based implications for teacher education programs seeking to enhance pre-service teachers' positive responses and reduce negative reactions toward inclusive education implementation.

To achieve these objectives, the study examined two specific research questions: How do different dimensions of teacher readiness—specifically Knowledge, Skills, and Attitudinal Readiness—influence pre-service teachers' positive acceptance of inclusive education? Additionally, how do these same readiness dimensions affect pre-service teachers' negative anxiety and apprehension toward inclusive education implementation?

2. Literature Review

Teacher readiness refers to the multidimensional preparation and capacity of educators to effectively implement educational practices and respond to diverse learning needs [2]. In the context of inclusive education, teacher readiness encompasses the cognitive, behavioral, and affective preparation necessary for successfully including students with disabilities in general education settings. This construct has gained significant attention as research consistently demonstrates that teacher preparedness is a critical determinant of inclusive education quality and student outcome.

The importance of teacher readiness in inclusive education cannot be overstated. Ready teachers are more likely to create positive learning environments, implement evidence-based practices, and maintain high expectations for all students [4]. Conversely, inadequately prepared teachers may experience higher stress levels, demonstrate resistance to inclusive practices, and inadvertently create barriers to student learning and participation [5]. Research has shown that teacher readiness significantly influences not only instructional effectiveness but also teacher retention and professional satisfaction in inclusive settings [6].

Contemporary research suggests that teacher readiness for inclusive education can be conceptualized across three interrelated dimensions:

Knowledge Readiness encompasses teachers' knowledge and understanding of the basic concepts, purposes, and processes of inclusive education, as well as the characteristics and learning needs of students with special educational needs [7], [8].

Skills Readiness refers to teachers' ability to effectively support and teach students with special educational needs within inclusive classrooms, encompassing their practical skills, instructional competencies, and interpersonal capacities. This includes their capacity to manage student behavior, differentiate instruction, communicate with parents about students' needs, collaborate with special education teachers, and create an inclusive and supportive learning environment. Skills Readiness reflects teachers' hands-on preparedness and competence to address the diverse and often complex demands of inclusive education in real teaching situations [7], [8].

Attitudes Readiness refers to teachers' positive or negative dispositions, values, and emotional responses toward inclusive education and students with special educational needs. It encompasses their beliefs about the potential of students with special needs, their willingness to include and support these learners in mainstream classrooms, and their overall openness and acceptance of inclusive practices. A high level of Attitudes Readiness indicates that teachers are supportive, empathetic, and committed to creating an equitable learning environment for all students, regardless of their abilities or backgrounds [7, 8].

These three dimensions are theoretically distinct yet empirically interrelated, with research suggesting that optimal teacher readiness requires development across all domains simultaneously [8]. However, the relative importance and causal relationships among these dimensions remain areas of active investigation.

In summary, teacher readiness for inclusive education represents a multifaceted construct that integrates cognitive, behavioral, and affective dimensions. While these three components—knowledge, skills, and attitudes—are theoretically distinct, empirical evidence suggests they function synergistically to influence teachers' capacity to implement inclusive practices effectively. The literature consistently demonstrates that comprehensive teacher readiness requires balanced development across all dimensions, as knowledge alone is insufficient without corresponding practical skills and positive attitudes. However, questions remain regarding the relative contribution and causal pathways among these dimensions, particularly in relation to how they influence teachers' emotional and behavioral responses to inclusive education demands. Understanding these relationships is crucial for developing targeted teacher preparation programs that can enhance inclusive education implementation success.

Teachers' Responses

Teachers' responses to inclusive education refer to the cognitive, emotional, and behavioral reactions educators exhibit when confronted with the implementation of inclusive practices [9]. These responses represent immediate and observable manifestations of teachers' internal processing of inclusive education demands and expectations. Understanding teachers' responses is crucial because they serve as proximal predictors of actual teaching behaviors and ultimately influence the quality of inclusive education experiences for students with disabilities.

The importance of examining teachers' responses to inclusive education stems from their documented impact on implementation success. Research consistently demonstrates that teachers' emotional and

attitudinal responses significantly predict their willingness to engage in inclusive practices, their persistence when facing challenges, and their overall effectiveness in diverse classrooms [10]. Positive responses are associated with higher-quality inclusive instruction, greater student engagement, and improved academic and social outcomes for students with disabilities. Conversely, negative responses can lead to implementation resistance, reduced instructional quality, and potentially harmful experiences for students with special needs.

Teachers' responses to inclusive education can be conceptualized across multiple dimensions. Research has identified both positive and negative response patterns that teachers commonly exhibit when implementing inclusive practices: Positive responses typically include acceptance, enthusiasm, confidence, and professional satisfaction. These responses reflect teachers' openness to inclusive education and their sense of efficacy in meeting diverse student needs. Teachers exhibiting positive responses often demonstrate greater creativity in instructional adaptation, stronger collaborative relationships with special education professionals, and higher levels of professional growth and learning. Negative responses commonly encompass anxiety, resistance, frustration, and professional stress. These responses often stem from perceived inadequacy, lack of support, or philosophical disagreement with inclusive principles. Teachers exhibiting negative responses may demonstrate avoidance behaviors, minimal compliance with inclusive requirements, or inadvertent exclusionary practices within inclusive settings.

In summary, teachers' responses to inclusive education represent critical mediating factors that directly influence implementation outcomes and student experiences. These responses exist along a continuum from positive acceptance to negative resistance, with each pattern carrying distinct implications for classroom practice and student success. The literature demonstrates that positive responses facilitate effective inclusive practices, while negative responses can undermine policy intentions and create barriers to meaningful inclusion. Understanding the antecedents and predictors of these varied response patterns is essential for developing interventions that can shift teachers toward more positive reactions and ultimately improve inclusive education quality.

The impact of teacher readiness on teachers' responses

Self-efficacy theory suggests that individuals' beliefs about their capabilities strongly influence their emotional reactions and behaviors. In educational contexts, teachers with higher self-efficacy tend to exhibit more positive attitudes and greater willingness

to implement challenging practices [11].

Empirical research supports the connection between teacher readiness and responses to inclusive education. Studies have consistently found that teachers with greater knowledge of special education and inclusive practices report more positive attitudes toward inclusion [12]. Similarly, teachers who possess practical skills in differentiated instruction and classroom management demonstrate higher confidence and lower anxiety when working with students with disabilities [13]. Research by Loreman et al. [14] found that comprehensive teacher preparation programs addressing knowledge, skills, and attitudes simultaneously resulted in more favorable responses to inclusive education compared to traditional programs focusing solely on theoretical content.

Furthermore, studies examining the relationship between different readiness dimensions suggest that practical competencies may be more predictive of positive responses than theoretical knowledge alone. Pit-ten Cate et al. [15] demonstrated that teachers' perceived self-efficacy in implementing inclusive practices was more strongly associated with positive attitudes than their factual knowledge about disabilities. This aligns with self-efficacy theory's emphasis on capability beliefs over declarative knowledge.

This theoretical foundation and empirical evidence suggests that teacher readiness—encompassing knowledge, skills, and attitudes—may significantly influence responses to inclusive education, with practical competencies potentially playing a particularly crucial role.

3. Methods

The study involved 255 pre-service teachers enrolled at a teacher education university in Taipei, Taiwan. Participants were recruited from the elementary teacher education program and represented diverse academic backgrounds and teaching specializations.

Instrument

Data were collected using the "Readiness and Responses to Inclusive Education Questionnaire," which presented participants with a realistic scenario followed by readiness and response measures. Participants were asked to imagine being an elementary homeroom teacher informed that their class would include students with various special needs (ADHD, emotional disturbances, learning disabilities, and physical disabilities) who would remain in the general classroom for all subjects. This scenario-based approach was designed to provide a concrete context for participants to consider their readiness and potential responses to inclusive

education implementation.

The questionnaire consisted of two main sections measuring teacher readiness and emotional responses. Teacher readiness was assessed through three dimensions: Knowledge Readiness (4 items, e.g., "I have enough knowledge about what inclusive education means and why it's important"), Skills Readiness (4 items, e.g., "I have the practical skills to teach special needs students in regular classes"), and Attitudinal Readiness (4 items, including reverse-coded items such as "I think putting special needs students in general classrooms will cause serious classroom management difficulties"). Emotional responses were measured through two constructs: Positive Acceptance (4 items measuring positive emotions including happy, eager, interested, and pleasant) and Negative Anxiety (3 items measuring negative emotions including fearful, anxious, and nervous). All items utilized a 5-point Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree).

Data Analysis

Latent variable path analysis was conducted using structural equation modeling (SEM). Two separate models were tested:

- Model 1: Predicting Positive Acceptance from the three readiness dimensions.
- Model 2: Predicting Negative Anxiety from the three readiness dimensions.

Model fit was evaluated using multiple indices: chi-square to degrees of freedom ratio (χ^2/df), Root Mean Square Error of Approximation (RMSEA), Comparative Fit Index (CFI), and additional absolute, incremental, and parsimony fit measures.

4. Results

Predicting Positive Acceptance (Model 1)

Model 1 demonstrated excellent fit to the data ($\chi^2/df = 1.86$, RMSEA = 0.06, CFI = 0.96; additional fit indices: GFI = 0.92, NFI = 0.93, PNFI = 0.76). Skills Readiness emerged as the strongest predictor of Positive Acceptance ($\beta = 0.45$, $p < .001$), indicating that pre-service teachers with greater practical competencies reported significantly higher positive emotional responses to inclusive education scenarios (see Figure 1).

Attitudinal Readiness also significantly predicted Positive Acceptance ($\beta = 0.32$, $p < .001$), demonstrating that more favorable attitudes toward inclusion corresponded with greater emotional acceptance.

Knowledge Readiness did not directly predict

Positive Acceptance, but showed a strong correlation with Skills Readiness ($r = 0.79$), suggesting potential indirect effects through skill development.

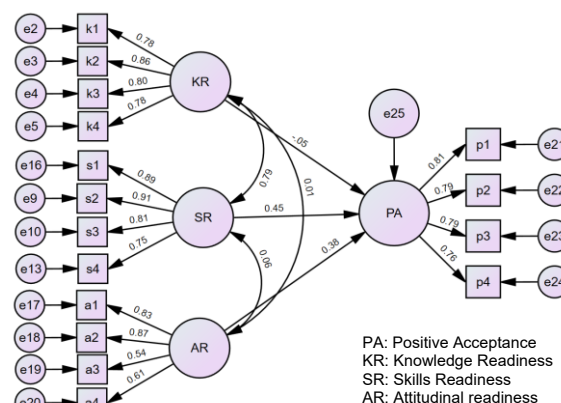


Figure 1. Path Model of Preservice Teachers' Readiness and Positive Responses Toward Inclusive Education

Predicting Negative Anxiety (Model 2)

Model 2 also demonstrated excellent fit to the data ($\chi^2/df = 1.90$, RMSEA = 0.06, CFI = 0.96; additional fit indices: GFI = 0.92, NFI = 0.93, PNFI = 0.74).

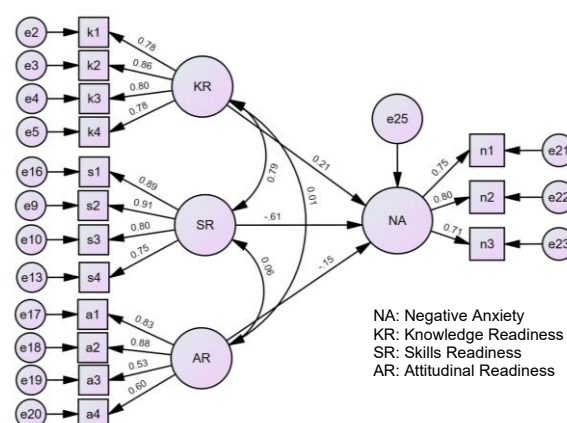


Figure 2. Path Model of Preservice Teachers' Readiness and Negative Responses Toward Inclusive Education

Skills Readiness had the strongest negative effect on Negative Anxiety ($\beta = -0.61$, $p < .001$), indicating that higher practical competencies were associated with substantially lower anxiety levels about inclusive education implementation (see Figure 2).

Attitudinal Readiness also significantly reduced Negative Anxiety ($\beta = -0.15$, $p < .05$), though the effect was smaller than for Skills Readiness.

Again, Knowledge Readiness did not directly predict Negative Anxiety but maintained a strong correlation with Skills Readiness.

Factor Loadings

All latent variables demonstrated strong internal consistency, with factor loadings ranging from 0.54 to 0.91 across all constructs, indicating robust measurement models.

5. Discussion

This study provides compelling evidence that Skills Readiness is the most critical factor influencing pre-service teachers' emotional responses to inclusive education. The finding that practical competencies had the strongest effects on both positive acceptance and anxiety reduction has important implications for teacher preparation.

The secondary role of Attitudinal Readiness suggests that while positive attitudes matter, they are insufficient without corresponding practical skills. This aligns with self-efficacy theory, which emphasizes the importance of perceived capability in determining emotional and behavioral responses.

Perhaps most intriguingly, Knowledge Readiness did not directly predict emotional responses, despite its strong correlation with Skills Readiness. This suggests that theoretical knowledge may influence responses primarily through its contribution to skill development, highlighting the limitations of knowledge-only approaches to teacher preparation.

Theoretical Implications

These findings strongly support Bandura's [11] self-efficacy theory in the context of inclusive education. Teachers' beliefs about their capabilities (operationalized as Skills Readiness) were the strongest predictors of emotional responses, consistent with self-efficacy theory's emphasis on perceived competence.

The results also illuminate the knowledge-practice gap in teacher education. While knowledge provides the foundation for effective practice, it appears insufficient for generating positive emotional responses without corresponding practical competencies.

Practical Implications for Teacher Education

Prioritize Skills-Based Training - Teacher preparation programs should significantly increase hands-on, experiential learning opportunities. This includes:

- Extensive practice with differentiated instruction techniques.
- Classroom management strategies for diverse learners.
- Simulated teaching experiences with students with disabilities.

- Extended practicum placements in inclusive settings.

Integrate Knowledge with Practice - Rather than teaching theoretical knowledge in isolation, programs should embed conceptual learning within practical skill-building activities:

- Case-based learning using real inclusive education scenarios.
- Role-playing exercises that apply theoretical concepts.
- Problem-based learning focused on inclusive teaching challenges.
- Reflection activities that connect theory to practice.

Address Attitudes and Emotions - Given the significant role of Attitudinal Readiness, programs should deliberately work to develop positive attitudes:

- Exposure to successful inclusive education examples.
- Opportunities for positive interactions with individuals with disabilities.
- Critical examination of assumptions and biases about disability.
- Discussion and reflection on inclusive education values.

Focus on Anxiety Reduction - The stronger effects on anxiety compared to positive acceptance suggest that addressing fears and concerns may be as important as building enthusiasm:

- Graduated exposure to inclusive teaching challenges.
- Emotional support and mentoring during field experiences.
- Explicit discussion of common concerns and effective responses.
- Building confidence through successful practice experiences.

5.1. Future Research Directions

Several research directions emerge from these findings:

Intervention Studies: Experimental evaluation of skills-focused teacher preparation programs to test causal relationships suggested by these correlational findings.

Mediation Analysis: Formal testing of whether Skills Readiness mediates the relationship between Knowledge Readiness and emotional responses.

Longitudinal Research: Following pre-service teachers through preparation and into practice to examine how readiness and responses evolve and predict actual teaching behaviors.

Cross-Cultural Validation: Replication in diverse cultural contexts to examine generalizability of findings.

Behavioral Outcomes: Investigation of how emotional responses relate to actual inclusive teaching practices and student outcomes.

5.2. Limitations

Several limitations should be acknowledged. The cross-sectional design precludes causal conclusions, though the theoretical foundation and statistical approach provide support for the proposed relationships. The single-institution sample may limit generalizability, particularly to different cultural contexts. Self-report measures are subject to social desirability bias, though the scenario-based approach may have reduced this concern.

Additionally, the study focused on emotional responses rather than actual teaching behaviors. While emotional responses are important predictors of behavior, future research should examine links between readiness, responses, and actual inclusive teaching practices.

6. Conclusions

This study demonstrates that practical skills readiness is the most powerful predictor of pre-service teachers' emotional responses to inclusive education. While knowledge and attitudes contribute to teacher preparation, they appear to work primarily through their relationship with practical competencies.

The findings suggest a fundamental shift in teacher preparation approaches is needed. Rather than relying heavily on theoretical coursework, programs should prioritize experiential learning that builds both competence and confidence. Skills-based training should be complemented by deliberate attention to attitudes and emotional readiness.

For policy and practice, these results support investments in:

- Extended field experiences in inclusive settings.
- Mentoring and support systems for pre-service teachers.
- Professional development focused on practical competencies.

- Evaluation systems that assess skills alongside knowledge.

The ultimate goal is preparing teachers who not only understand inclusive education principles but feel capable and confident implementing them effectively. This study provides evidence that such preparation is possible when programs focus on building practical readiness alongside theoretical understanding.

As inclusive education continues to expand globally, understanding and addressing the factors that influence teacher responses becomes increasingly critical. This research contributes to that understanding while pointing toward more effective approaches to teacher preparation for inclusive education.

7. References

- [1] UNESCO. (1994). The Salamanca statement and framework for action on special needs education. UNESCO.
- [2] Hargreaves, A. (2004). Inclusive and exclusive educational change: Emotional responses of teachers and implications for leadership. *School Leadership and Management*, 24(3), 287-309.
- [3] Sharma, U., and Nuttal, A. (2016). The impact of training on pre-service teacher attitudes, concerns, and efficacy towards inclusion. *Asia-Pacific Journal of Teacher Education*, 44(2), 142-155.
- [4] McLeskey, J., Barringer, M. D., Billingsley, B., Brownell, M., Jackson, D., Kennedy, M., ... and Ziegler, D. (2017). High-leverage practices in special education. Council for Exceptional Children and CEEDAR Center.
- [5] Forlin, C., Loreman, T., Sharma, U., and Earle, C. (2009). Demographic differences in changing pre-service teachers' attitudes, sentiments and concerns about inclusive education. *International Journal of Inclusive Education*, 13(2), 195-209.
- [6] Billingsley, B. S. (2004). Special education teacher retention and attrition: A critical analysis of the research literature. *Journal of Special Education*, 38(1), 39-55.
- [7] Adams, D., Mohamed, A., Moosa, V., and Shareefa, M. (2023). Teachers' readiness for inclusive education in a developing country: Fantasy or possibility?. *Educational Studies*, 49(6), 896-913.
- [8] Moosa, V., Shareefa, M., Adams, D., and Mohamed, A. (2022). Assessing teacher readiness for inclusive education in Maldives: Instrument modification and validation. *International Journal of Disability, Development and Education*, 69(6), 1888-1904.
- [9] Hastings, R. P., and Oakford, S. (2003). Student teachers' attitudes towards the inclusion of children with special needs. *Educational Psychology*, 23(1), 87-94.

- [10] Boyle, C., Topping, K., and Jindal-Snape, D. (2013). Teachers' attitudes towards inclusion in high schools. *Teachers and Teaching*, 19(5), 527-542.
- [11] Bandura, A. (1997). *Self-efficacy: The exercise of control*. W.H. Freeman.
- [12] Avramidis, E., and Norwich, B. (2002). Teachers' attitudes towards integration/inclusion: A review of the literature. *European Journal of Special Needs Education*, 17(2), 129-147.
- [13] Florian, L. (2012). Preparing teachers to work in inclusive classrooms: Key lessons for the professional development of teacher educators from Scotland's inclusive practice project. *Journal of Teacher Education*, 63(4), 275-285.
- [14] Loreman, T., Sharma, U., and Forlin, C. (2013). Do pre-service teachers feel ready to teach in inclusive classrooms? A four-country study of teaching self-efficacy. *Australian Journal of Teacher Education*, 38(1), 27-44.
- [15] Pit-ten Cate, I. M., Markova, M., Krischler, M., and Krolak-Schwerdt, S. (2018). Promoting inclusive education: The role of teachers' competence and attitudes. *Insights into Learning Disabilities*, 15(1), 49-63.