



Development of an Inventory for Measuring Prospective Teachers' Attitudes Toward Inclusive Teaching Practices: A Theoretical Framework

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Abstract

Background: The success of inclusive education fundamentally depends on teachers' attitudes, beliefs, and preparedness. Despite extensive research demonstrating the importance of positive teacher attitudes for successful inclusive practices, significant gaps remain in understanding how these attitudes translate into effective implementation.

Purpose: This paper presents a comprehensive theoretical framework for developing an "Inventory of Prospective Teachers' Attitude on Inclusive Teaching Practices," addressing critical gaps in existing measurement approaches.

Method: We conducted an extensive review of theoretical models and empirical research on teacher attitudes toward inclusive education, examining Social Cognitive Theory, the tripartite model of attitudes, and contemporary measurement instruments.

Findings: The review reveals that while teachers generally hold marginally positive attitudes toward inclusion, significant variations exist across contexts. Pre-service teacher preparation represents a critical window for developing positive attitudes, yet current programs inadequately prepare teachers for inclusive settings. Existing measurement instruments demonstrate various limitations, including self-report bias, limited theoretical grounding, and cultural specificity.

Implications: The proposed inventory should integrate multiple theoretical perspectives, incorporate authentic evidence-based items capturing cognitive, affective, and behavioral dimensions, and demonstrate robust psychometric properties. This instrument can contribute to both theoretical understanding and practical applications in teacher preparation programs.

Keywords: inclusive education, teacher attitudes, pre-service teachers, attitude measurement, Social Cognitive Theory, teacher preparation

I. Introduction

The implementation of inclusive education represents one of the most significant educational reforms of the 21st century, fundamentally transforming how educational systems serve students with diverse learning needs. While empirical evidence demonstrates predominantly positive effects of inclusion on academic achievement when comparing students in inclusive settings with those in specialized programs (Cullen et al., 2010; Ruijs & Peetsma, 2009), the success of inclusive education fundamentally depends on the attitudes, beliefs, and preparedness of teachers who serve as the primary implementers of these practices (Avramidis & Norwich, 2002; de Boer et al., 2011; Sharma et al., 2008).

Despite the recognized importance of teacher attitudes in inclusive education success, Lüke and Grosche (2018) note that "although positive teacher attitudes toward inclusion are often claimed as a prerequisite for successful inclusive education, quantitative empirical evidence for that claim is very scarce" (p. 245). This fundamental gap in understanding the mechanisms through which attitudes translate into effective inclusive practices underscores the critical need for sophisticated, theoretically grounded measurement instruments.

The purpose of this paper is to present a comprehensive theoretical framework for developing an "Inventory of Prospective Teachers' Attitude on Inclusive Teaching Practices." By integrating multiple theoretical perspectives and addressing limitations in existing measures, this framework aims to advance both theoretical understanding and practical applications in teacher preparation for inclusive education.

II. Theoretical Foundations

Social Cognitive Theory and Teacher Self-Efficacy

The theoretical foundation for understanding prospective teachers' attitudes toward inclusive teaching practices draws heavily from Social Cognitive Theory, developed by Bandura (1986, 1997). This theory emphasizes the reciprocal interaction between personal factors, environmental influences, and behavior, providing a robust framework for understanding how teachers develop their attitudes and self-efficacy beliefs regarding inclusive practices (Bandura, 1997; Tschannen-Moran & Woolfolk Hoy, 2001).

Teacher self-efficacy, a central construct within Social Cognitive Theory, refers to teachers' beliefs about their capability to organize and execute courses of action required to successfully accomplish specific teaching tasks (Bandura, 1997). Research consistently demonstrates that teachers with strong self-efficacy beliefs persist longer in difficult situations, are more willing to try new teaching approaches, show greater job satisfaction, and demonstrate higher commitment to their profession (Tschannen-Moran & Woolfolk Hoy, 2001). These characteristics are particularly crucial for inclusive education, where teachers must adapt their practices to meet diverse student needs (Sharma et al., 2012; Wray et al., 2022).

The Tripartite Model of Attitudes

The measurement of attitudes toward inclusive teaching practices is grounded in the tripartite model of attitudes proposed by Rosenberg and Hovland (1960) and further developed by Eagly and Chaiken (1993). This foundational model conceptualizes attitudes as consisting of three interconnected components:

Cognitive Component: This encompasses teachers' beliefs, knowledge, and thoughts about inclusive education. It includes their understanding of inclusive principles, awareness of different disabilities, and beliefs about the effectiveness of inclusive practices (Eagly & Chaiken, 1993; Triandis, 1971).

Affective Component: This reflects the emotional reactions and feelings teachers experience toward inclusive education, including their comfort level with students with disabilities, empathy, and emotional responses to inclusive settings (Eagly & Chaiken, 1993; Triandis, 1971).

Behavioral Component: This involves teachers' intentions to act and their actual behaviors related to inclusive practices, including their willingness to adapt instruction, collaborate with special educators, and implement accommodations (Eagly & Chaiken, 1993; Triandis, 1971).

Research validates that these three components work together to form overall attitudes, with each component contributing to teachers' readiness to implement inclusive practices (Cullen et al., 2010; MacFarlane & Woolfson, 2013).

III. Contemporary Research on Teacher Attitudes

Factors Influencing Positive Attitudes

Recent cross-national research indicates that teachers generally hold marginally positive attitudes toward inclusive education, though significant variations exist across different contexts and populations (Ewing et al., 2018; Pit-ten Cate et al., 2018). A large-scale study involving 908 teachers across five countries revealed that cognitive, affective, and behavioral factors significantly influence teachers' attitudes toward inclusion (Ewing et al., 2018).

Several factors consistently correlate with more positive attitudes toward inclusion:

Teaching Experience and Training: The relationship between teaching experience and attitudes toward inclusion is complex and nuanced. While some studies find that additional practical training builds necessary skills and self-confidence, increasing teachers' sense of responsibility for teaching students with special educational needs (Ewing et al., 2018), other research suggests that attitudes may become less positive with extensive experience, particularly among teachers with more than 20 years of experience (Avramidis & Norwich, 2002).

Educational Level and Preparation: Teachers' educational qualifications significantly impact their attitudes toward inclusion. Studies consistently show that teachers with more training in special education and inclusive practices demonstrate more positive attitudes (de Boer et al., 2011; Forlin et al., 2011; Malinen et al., 2013). The highest degree completed by teachers shows a statistically significant effect on attitudes toward teaching all students (Ewing et al., 2018).

School Level Differences: Primary school teachers consistently demonstrate more positive attitudes toward inclusion compared to secondary school teachers (Chao et al., 2017; Yada & Savolainen, 2017). This pattern appears both in in-service and pre-service teacher populations, with primary pre-service teachers showing significantly more positive attitudes and greater responsiveness to inclusive education training (Yada & Savolainen, 2017).

The Attitude-Behavior Gap

A concerning finding in the literature is the existence of an attitude-behavior gap. Research from Korea found that while 41.37% of teachers expressed positive attitudes toward inclusion, 55.16% were unwilling to actually participate in inclusive programs (Lüke & Grosche, 2018). This disconnect between stated beliefs and behavioral intentions highlights the complexity of attitude measurement and the need for more sophisticated assessment tools that capture not only attitudes but also behavioral intentions and actual practices.

IV. Pre-Service Teacher Preparation: A Critical Window

Current State of Teacher Preparation Programs

Pre-service teacher education represents a critical window for developing positive attitudes toward inclusive education. Research consistently demonstrates that pre-service training is the optimal time to increase positive attitudes and modify negative attitudes toward inclusion (Florian & Rouse, 2009; Sharma et al., 2008). However, multiple studies reveal that current teacher preparation programs inadequately prepare teachers for inclusive settings (Allday et al., 2013; Harvey et al., 2010; Lancaster & Bain, 2010).

A comprehensive review of pre-service teacher preparation programs identifies several key deficiencies:

Limited Course Coverage: Many teacher education programs provide insufficient coverage of inclusive education content. For example, only 40% of music education programs require coursework on teaching students with disabilities (VanWeelden & Whipple, 2014). When inclusion content is provided, it often focuses on disability characteristics rather than practical methodologies for inclusive practices (Lancaster & Bain, 2010).

Theory-Practice Gap: Pre-service teachers consistently report that their preparation focuses too heavily on theoretical knowledge without adequate practical application (Harvey et al., 2010; Kozleski et al., 2011). Students indicate that meaningful preparation for inclusion occurs primarily during field experiences rather than university coursework (Harvey et al., 2010).

Inadequate Field Experiences: The quality and design of practicum experiences significantly impact pre-service teachers' attitudes toward inclusion. Successful practicum experiences require supervision by inclusion-oriented associate teachers and placement in diverse K-12 classrooms that exemplify inclusive practices (Harvey et al., 2010).

V. Factors Influencing Pre-Service Teacher Attitudes

Research identifies several key factors that influence pre-service teachers' attitudes toward inclusive education:

Prior Contact with Persons with Disabilities: Direct personal experience with individuals with disabilities consistently predicts more positive attitudes toward inclusion (Forlin et al., 2011; Sharma et al., 2008). This includes both personal relationships and professional interactions during field experiences.

Coursework and Training: Completion of specific coursework on inclusive education significantly improves attitudes, particularly among primary pre-service teachers (Yada & Savolainen, 2017). However, the impact varies by program level, with secondary pre-service teachers showing less responsiveness to inclusive education modules (Yada & Savolainen, 2017).

Perceived Self-Efficacy: Pre-service teachers' confidence in their ability to implement inclusive practices strongly correlates with their attitudes toward inclusion (Sharma et al., 2012; Wray et al., 2022). Programs that enhance self-efficacy through skill-building and supported practice experiences tend to produce more positive attitudes.

VI. Existing Measurement Instruments: Strengths and Limitations

Review of Established Scales

The literature reveals numerous instruments designed to measure teacher attitudes toward inclusive education, each with distinct characteristics:

Teacher Attitudes Toward Inclusion Scale (TATIS): This scale measures teachers' attitudes across three dimensions - attitudes toward students with disabilities in inclusive settings, beliefs about the efficacy of inclusion, and beliefs about professional roles and responsibilities (Cullen et al., 2010; Gregory & Noto, 2012). Validation studies indicate acceptable reliability, though some studies find that teachers score "not high" on all three dimensions (Cullen et al., 2010).

Scale of Teachers' Attitudes Towards Inclusive Classrooms (STATIC): This 20-item scale measures teachers' attitudes toward students with special needs in general education classrooms using a 5-point Likert scale (Cochran, 1997). The original validation study included 516 teachers and demonstrated high internal consistency ($\alpha = .89$).

Teacher Attitudes to Inclusion Scale (TAISA): Used in multiple international studies, this scale has undergone principal components analysis and demonstrates acceptable psychometric properties (Yada & Savolainen, 2017). Research using TAISA consistently finds differences between primary and secondary teachers' attitudes.

Psychometric Considerations

Contemporary standards for attitude measurement require internal consistency coefficients (Cronbach's alpha) of .70 or higher, with values above .80 considered good and above .90 considered excellent (DeVellis, 2017; Nunnally & Bernstein, 1994). Many existing scales meet these criteria, though some subscales show lower reliability (MacFarlane & Woolfson, 2013).

Construct validity represents the most critical aspect of attitude measurement, encompassing both convergent validity (correlation with similar constructs) and discriminant validity (distinction from unrelated constructs) (Campbell & Fiske, 1959; Messick, 1995). Factor analysis has become the standard approach for establishing construct validity in attitude measurement (Costello & Osborne, 2005; Yada & Savolainen, 2017).

VII. Methodological Challenges and Future Directions

Current Limitations

Research on teacher attitudes toward inclusive education faces several methodological challenges:

Self-Report Bias: Most existing measures rely on self-reported attitudes, which may not accurately reflect actual behavior or implicit biases (Lüke & Grosche, 2018; Paulhus, 1991). The gap between stated attitudes and observed behavior suggests the need for more sophisticated measurement approaches.

Limited Theoretical Grounding: Many existing scales lack strong theoretical foundations, making it difficult to interpret results or understand the mechanisms underlying attitude formation and change (Ajzen, 2001; Fishbein & Ajzen, 2010).

Cultural Specificity: Most attitude scales have been developed and validated in Western contexts, limiting their applicability to diverse global populations (Sharma et al., 2008). There is a growing need for culturally responsive measurement instruments.

Recommendations for Future Instrument Development

Based on this comprehensive review, we propose the following recommendations for developing an effective "Inventory of Prospective Teachers' Attitude on Inclusive Teaching Practices":

1. **Integrate Multiple Theoretical Perspectives:** The instrument should combine Social Cognitive Theory, attitude theory, and contemporary understanding of inclusive pedagogy to provide a comprehensive theoretical foundation (MacFarlane & Woolfson, 2013; Pit-ten Cate et al., 2018).
2. **Include Behavioral Indicators:** Beyond attitudinal self-reports, the inventory should incorporate behavioral intentions and objective measures of inclusive practice implementation (Lüke & Grosche, 2018; MacFarlane & Woolfson, 2013).
3. **Ensure Cultural Responsiveness:** The instrument should be developed with consideration for diverse cultural contexts and validated across different populations (Malinen et al., 2013; Sharma et al., 2008).
4. **Utilize Contemporary Measurement Approaches:** The inventory should leverage digital platforms and innovative assessment methods to capture more nuanced and authentic attitude data (DeVellis, 2017; Pit-ten Cate et al., 2018).
5. **Incorporate Longitudinal Design Elements:** The instrument should be suitable for tracking attitude development throughout teacher preparation programs and into early career practice (Kozleski et al., 2011; Harvey et al., 2010).

VIII. Conclusion

The development of an "Inventory of Prospective Teachers' Attitude on Inclusive Teaching Practices" represents a critical need in contemporary educational research. This theoretical framework, grounded in Social Cognitive Theory and the tripartite model of attitudes, provides a foundation for creating a comprehensive instrument that addresses the limitations of existing measures.

The proposed inventory should capture the cognitive, affective, and behavioral dimensions of attitudes toward inclusive teaching practices while demonstrating robust psychometric properties. By incorporating authentic, evidence-based items and addressing methodological challenges such as self-report bias and cultural specificity, this instrument can contribute significantly to both theoretical understanding and practical applications in teacher preparation programs.

Future research should focus on developing and validating this inventory across diverse populations and contexts, examining its predictive validity for actual inclusive teaching practices, and utilizing it to evaluate the effectiveness of teacher preparation programs. Ultimately, such an instrument can support the development of more effective and committed inclusive educators, thereby advancing the goals of inclusive education for all students.

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