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*Article*

# Prepared to Ensure Quality Education for All? A Study of PreService Teachers' Self-Efficacy for Inclusion in Spain and the United States

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**Abstract:** The 2030 Agenda for Sustainable Development set a calendar to make quality education for all effective through SDG4. Teachers being key to achieve this goal, this study examined whether or not future teachers have developed competence to teach inclusively by the time they graduate. Using a survey approach, we gathered data from students of two countries enrolled in two different teacher education pathways. Participants were 330 pre-service elementary school teachers from the US and Spain who completed the TEIP and OLTI scales. Respondents reported a moderate level of self-efficacy for inclusive practice, however, pre-service teachers from the Spanish sample pursuing a general preparation program reported significantly less self-efficacy than those from the US sample enrolled in a dual certification program. Regardless of type of program, there were strong statistically significant differences in perceptions of self-efficacy between those participants who were given sufficient opportunity to learn to teach inclusively and those who did not. Of the two samples, pre-service teachers from Spain consistently reported lower ability in managing classroom behavior, using inclusive instruction, and collaborating with colleagues and families compared to their counterparts from the US. Findings depict that to make progress in quality education for all, competence development for inclusion should be integrated as a core component in any type of teacher education program and teacher self-efficacy regarded as a quality standard indicator for sustainable inclusive practice.

**Keywords:** inclusive education; initial teacher preparation; SDG4; pre-service teacher self-efficacy; inclusive practice; international studies; Spain; United States

## 1. Introduction

Inclusive education continues to be one of the main priorities of education systems around the world. It refers to the complete schooling of children and young people with or without special educational needs (SEN) with their same-age peers with the provision of the necessary services and supports. Yet its implementation is a challenging and complex task [1,2]. Successful inclusion requires teachers to be able to work with a variety of learners, develop strategies and teaching approaches that adapt to their individual needs, and collaborate with colleagues and families [3,4]. While there is unanimity that the inclusion movement has contributed to make education more equal, fair and equitable for all [4], there are differences in national policies and achievements that the international debate on the effectiveness of inclusion has not sufficiently considered, thereby ignoring how various policies interact within and between different countries [5]. In the context of the *Education 2030 Framework for Action* [6], which is the roadmap for achieving Sustainable Development Goal 4 (Ensure inclusive and quality education for all), having comparable data can enrich national and international approaches to overcoming inclusion challenges and barriers, one of the biggest barriers being the inadequate preparation of teachers for inclusion [7]. To this end, the present study,

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aimed to describe and compare pre-service teachers' perceptions of self-efficacy for inclusive practice in the United States (US) and Spain by controlling type of teacher education (TE) program and opportunity to learning to teach inclusively. This will help identify teacher competencies and inform curriculum to better prepare them for equitable quality education for all.

## 2. Literature Review

### *2.1. Background*

The right to an inclusive education, encouraged internationally by the United Nations (UN) and articulated in the Convention on the Rights of the Child [8] and in the Convention on the Rights of Persons with Disabilities [9], puts signatory countries under pressure to improve equity in education for all. Several global agreements led to the acquisition of a commitment that is now universally accepted:

- The 1960 UNESCO Convention against Discrimination in Education and the 1990 World Declaration on Education for All [10], adopted in Jomtien and reiterated in 2020 in Dakar, called on countries to take measures to ensure 'equality of treatment in education' and 'no discrimination in access to learning opportunities' for underserved groups.
- The Salamanca Statement [11] and the Convention on the Rights of Persons with Disabilities [9] advanced the principle that all children should be at 'the school that they would attend, if the child did not have a disability', and officially contributed to launching inclusive education as an international commitment and a fundamental right.
- The 2030 Agenda for Sustainable Development [4] established a timeline to make this right a reality through SDG4, recognizing quality inclusive education and sustainability as educational goals in Target 4.7 for which a prerequisite is 'Substantially increase the supply of qualified teachers' (Target 4.c).

In response to this commitment, UNESCO has provided significant frameworks for guiding activity. One of the most significant is the recently introduced *Framework for the Implementation of Education for Sustainable Development beyond 2019* [12], which spans from 2020 to 2030, and aims to reorient education and learning processes to ensure greater equity and sustainability. This endeavour requires, according to Antoninis et al. [13], a significantly larger profile in terms of commitment, curriculum transformation, and indicators to monitor progress, all of which must be framed in skills and competencies, because what is not measured is rarely adopted and sustained. But above all, it requires improving the quality of teacher training by eliminating the barriers that currently exist in TE programs, namely, the dominance of an add-on approach, separate TE tracks, and inadequate preparation for inclusion [2].

### *2.2. Inclusive Education in the United States and Spain*

The impact of worldwide inclusion efforts can be observed in the growth and evolution of inclusive education in the US and Spain. Yet, due to their distinct historical, cultural, and social backgrounds both countries have adopted rather dissimilar approaches to implementing and sustaining inclusion. In the US, a comprehensive set of legislations (the Education for All Handicapped Children Act of 1975, the Americans with Disabilities Act of 1990, the No Child Left Behind of 2001, the Individuals with Disabilities Education Act of 2004 (IDEA), and the Every Student Succeeds Act of 2015), have collectively ensured the provision of a free and sustainable public education to children and youth with disabilities or other personal conditions in need of support. Although the concept of inclusion is not explicitly referenced in any US legislation, the implementation of supports and services for students with SEN has adhered to the premise of 'least restrictive environment,' which has fostered inclusivity and, over time, less restriction has implied more inclusion in the US education system [14]. This inclusive approach has been accompanied by the implementation of a Multi-Tier System of Supports, a framework that helps educators provide

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differentiated support for students based on their needs. But due to increasing demands, the education system has been compelled to critically re-examine whether TE programs are adequately preparing general education classroom teachers with the essential competencies to effectively cater to the unique and multiple needs of all students.

In contrast, the implementation of inclusive education in Spain, which has a comparatively less advanced special education system than the US, can be attributed to a lengthy and financially troublesome educational reform and democratization process initiated after Franco's death in 1975. Inclusion has been conceptualized as a systematic process that seeks to ensure equitable access to high-quality education for all individuals, with particular emphasis on students facing greater marginalization. Since the enactment of PL13/1982 (Law for the Integration of People with Disabilities, LISMI, in regular schools), there have been significant advancements in mainstreaming all students in regular classrooms. Inclusive approaches began to gain relevance in 1994 with the proclamation of the Salamanca Declaration [11] and a series of legislative measures such as PL 1/1990 on General Organization of the Education System, PL 10/2002 on Quality of Education, and PL 8/2013 for the Improvement of the Quality of Education as amended by the LOMLOE (PL 3/2020 of December 29) that contributed to enhance the Spanish education system's capacity for equity and inclusivity. Furthermore, with the UNESCO's [6] Incheon Declaration proposal for SDG4, the Spanish Government mandated that mainstream schools must be adequately equipped to meet the needs of all students within a decade and emphasized the inclusion of Education for Sustainable Development (ESD) in TE programs anticipating that by the year 2025 it will be a requirement for all teaching personnel to have received qualifications pertaining to the goals outlined in the 2030 Agenda.

To date, all of these initiatives aimed to ensure quality, equity, and sustainability into education systems have yielded limited results in terms of modifying the curriculum, teaching methods and teacher competencies, resulting in the recognition that TE programs are not effectively equipping prospective teachers with the necessary skills to foster inclusivity, as outlined in the global indicators [13] and the specialized research literature in the field [7,15].

### *2.3. Research on Initial Teacher Preparation for Inclusion*

Teacher education research for inclusive teaching is limited and often referred to as poor and inadequate [7,16–20]. The existing body of research suggests that the topic is often overlooked in initial TE programs, even in prestigious universities worldwide [7–21]. This indicates that the task of adequately preparing teachers for teaching in inclusive classrooms is a universal challenge [22]. Countries typically offer different programs and pathways for teacher preparation, with two predominant approaches being the 'additive' approach and the 'infusing' approach [23]. The first approach uses specialist input to add content knowledge about diversity/inclusion to TE programs, whereas the latter aims to incorporate specialist knowledge into all existing subjects. There has been a significant amount of discussion regarding the most effective approach [18,24], however, no clear evidence has emerged to establish the superiority of one model over the other. In the US, specialized teacher training based on educational disability or special education needs is still the standard, while in UK or Ireland specialization is obtained after initial training, and in Spain as a separate path within the generic model of initial training.

Several research studies have been conducted to examine the content of inclusion in initial TE programs. In Europe, one of the most influential initiatives comes from the *Teacher Education for Inclusion*, TE4I project [25], which explored how teachers in 25 countries were equipped to be inclusive in their classrooms in order to identify the fundamental competencies required to pursue a career in teaching, regardless of subject, specialization, or age group they intend to teach [26]. The findings were outlined in the *Profile of Inclusive Teachers* including the following areas of competency: supporting all learners, collaborating with others, appreciating learner diversity, and engaging in professional development. Based on this profile, the National Council for Special Education in Ireland conducted a study [27] to explore the extent to which the 2012 Irish educational policy reforms implemented effectively prepared prospective teachers to embrace inclusive practices. After

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conducting a content analysis of 27 programs from 13 universities, it was found that the inclusive teaching content incorporated into these programs continued to perceive SEN through a conventional lens. Similarly, a study by Sánchez-Serrano et al. [28] in Spain reviewed the curricular components for inclusive teaching in the Elementary Education programs offered by the 39 public universities in the country. Despite the explicit acknowledgement of equity and social justice as basic principles in the programs, they found an unbalanced presence of diversity and inclusion content across the subjects. The inclusion of such content was inconsistent, with some programs offering no related subjects and others offering as much as three, typically as elective subjects. Therefore, it is not surprising that a significant proportion of general education teachers in Spain, specifically 57% as reported in the TALIS 2018 research study conducted by the OECD [29], indicated that they were not receiving sufficient training to serve students with diverse educational needs. In the context of secondary school TE programs, Nashl and Norwich [30] in the UK and López-Torrijo and Mengual-Andrés [31] in Spain conducted similar studies examining the coverage of inclusive education in the Postgraduate Certificate in Secondary Education. Their findings revealed significantly less coverage of the topic compared to elementary education programs.

These findings align with those of Brownell et al. [32] in the US, who found that out of the 64 general TE programs surveyed in the country, only 50% of them explicitly addressed the topics of diversity and inclusion. In 2010, Harvey et al. [33] administered a national survey called the *Preservice Teacher Preparation for Inclusion Survey*. The findings revealed that educational institutions were offering courses in special education and exceptionality, but were not giving any courses on inclusion or related issues. Similarly, Metz et al. [34] examined the curriculum content of the top five general education TE programs in the country, as determined by the Best Grad Schools [21]. By analyzing syllabus descriptors, the researchers found a notable absence of the term 'inclusion' in all of the programs. In another study, Allday et al. [35] examined 109 general TE programs across the country to determine the specific number of instructional hours devoted to inclusion, instruction, and management of students with SEN. They found that student teachers had limited exposure, if any, to coursework and training related to special inclusive education. Out of the universities surveyed, only 73 of them required three-credit hours in special/inclusive preparation, with a specific focus on disability characteristics and a limited number of programs offered courses on differentiation and collaboration between general and special education teachers.

Although a significant number of the general TE programs in the US do not require inclusive education coursework, some programs have begun to include courses and practicum experiences that specifically address inclusive practice within content areas. Thompson [36] developed a course aimed at secondary school pre-service mathematics teachers, which incorporated a practicum component within an inclusive mathematics classroom setting. The researcher found that student teachers who participated in this course exhibited not only more positive attitudes toward students with disabilities and inclusion, but also felt better prepared to implement inclusive practices in comparison to their peers who did not take the course. This finding is substantiated by a comparable study conducted by Lucas and Frazier [37], who surveyed a sample of 110 pre-service teachers before and after completing a practicum experience in an inclusive classroom. The majority of student teachers reported that their perceptions of students with SEN were more positive, and their confidence in implementing inclusive practices increased subsequent to this experience. In contrast, Shani and Hebel [38] examined the effects of practicum experiences on pre-service teachers and found that student teachers who took courses lacking a practicum component, experienced a disconnection between their theoretical understanding of inclusion and their ability to effectively use this knowledge in practice.

In a comprehensive examination at global scale, UNICEF analyzed TE programs across 111 countries [39]. The report revealed that most programs exhibited deficiencies in adequately preparing teachers with the necessary skills and knowledge to effectively teach students with diverse abilities within mainstream classroom settings. Only 33% of respondents reported that their TE programs included instruction on inclusive education. These findings are consistent with those presented in the

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2020 Global Education Monitoring Report [40], which highlighted that despite 61% of 168 countries claiming to provide TE on inclusion and 44% mentioning teacher training on inclusion in their legislative and policy frameworks, none of these countries explicitly outline the specific components of teacher training for inclusive teaching. Therefore, current research on initial TE for inclusion indicate that insufficient preparation of teachers is a worldwide phenomenon [22], not being a surprise that pre-service teachers feel unprepared to teach all students in mainstream settings [27,41–44]. Moreover, as Cretu and Morandau [7] emphasized in their bibliometric study, research in initial TE for inclusion has been monopolized by a few countries and groups from US, Australia, Spain, Canada and UK, having produced at least 70% of the publications. So in order to ensure progress in the field, there is a growing need to develop more cross-border research that focuses not just on the knowledge and skills that pre-service teachers must acquire, but on their perceived efficacy in ensuring quality education for all.

### *2.4. Self-Efficacy for Inclusive Practice and Quality Education for All*

Quality of education is positively associated with teacher self-efficacy, which is also considered a quality indicator of education systems. Self-efficacy refers to teachers' beliefs in their ability to bring about desired student outcomes [45]. This ability is considered a powerful predictor of higher student achievement and motivation [46,47], as well as a factor that significantly influences teachers' instructional practices, commitment and job satisfaction, contributing to less teacher stress and burnout [48,49]. The positive effects of self-efficacy are commonly explained through Bandura's [50] theory of self-efficacy, which posits that individuals with high self-efficacy tend to exhibit greater engagement in tasks and demonstrate more perseverance when confronted with obstacles or new challenges.

When applied within the context of inclusive education, self-efficacy translates into better teacher work management and engagement, as well as greater confidence in one's ability to effectively teach all students [51,52]. Teacher self-efficacy has been extensively measured using the *Teacher Efficacy for Inclusive Practice* (TEIP) scale [53], which assesses efficacy in using inclusive instruction, efficacy in collaborating with parents and professionals, and efficacy in managing students' disruptive behavior. Specifically, self-efficacy may also be predictive of attitudes towards inclusion, as revealed in Yada's [54] meta-analysis, having implications for inclusive practice. However, these attitudes may differ depending on type of TE program. In a study conducted by Kim [55], the attitudes and self-efficacy of 110 student teachers enrolled in ten different institutions in the US, whose teaching programs included combined (general and special/inclusive education), separate (special/inclusive education), and general TE programs, were examined. The findings revealed that pre-service teachers from combined programs exhibited significantly more positive attitudes towards inclusion compared to their counterparts from separate and general TE programs. In another study, Malinen et al. [56] examined a cohort of 552 pre-service teachers from three Chinese universities. Their findings revealed a strong correlation between teacher self-efficacy and attitudes, indicating that teachers who felt more capable of teaching in a classroom with diverse learners exhibited more positive perceptions and attitudes towards inclusion. Likewise, Hecht et al. [57] examined the level of teacher self-efficacy among 221 Italian and 143 Austrian secondary school pre-service teachers and found that: (1) both groups exhibited high levels of teacher self-efficacy, with the Italian sample scoring higher than their Austrian counterparts; and that (2) attitudes and self-efficacy for inclusive practice correlated significantly with efficacy in inclusive instruction and collaboration but not with efficacy in managing behavior.

Along with the scarcity of research on teacher preparation for inclusion, there is also a limited number of studies that have explored and compared teachers' self-efficacy in both mono-cultural vs. multicultural contexts, as well as those who have undergone training in either a general or dual certification program [58]. It remains unclear whether prospective teachers may experience different levels of self-efficacy for inclusive practices in classrooms characterized by high vs. low cultural diversity, as well as if their self-efficacy varies depending on their educational background (generalist

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or combined program with general + special education). In light of the growing diversity in schools and the importance of teacher self-efficacy for effective inclusive teaching, it is both timely and relevant to thoroughly examine these inquiries. Considering the emphasis placed by UNESCO's recent global framework on ESD, *ESD for 2030* [12] on increasing the quality of education and teachers, it is critical to examine teachers' perceptions of self-efficacy for inclusion to improve what has been identified as deficiencies within teacher preparation programs [7,22,29,40]. This is particularly important, as general education teachers from all over the world are experiencing challenges in effectively teaching all students, regardless of their individual needs, within inclusive classrooms. This study, therefore, investigated the perceived self-efficacy for inclusion of pre-service elementary school teachers after graduation, while also identifying their strengths and areas for improvement in their abilities to teach all. The researched questions were:

1. Do pre-service elementary teachers in the United States and Spain (enrolled in a combined vs. general education program) feel confident in their ability to teach using an inclusive approach after graduation?
2. Does perceived ability vary depending on type of TE program and opportunity to learn to teach inclusively during preparation?

## 3. Materials and Methods

### *3.1. Participants and Context*

The present study was conducted at two public universities, one Spanish and the other from the US. The participants were undergraduate pre-service teachers pursuing a degree in Elementary Education. Both institutions, according to their mission statements, prioritize providing high-quality education to their students, with a strong emphasis on equity and equal opportunities. But they differed in the focus on their programs, with the XX being characterized as generalist and the XXX dual/combined.

The Spanish institution is a publicly funded university located in the Valencian Community with a student population of approximately 25000 individuals. Every year, about 1200 students graduate from the Faculty of Education, with 99% of them being Spaniards and predominantly female (71%). During the 2020-2021 academic year, the College experienced a total enrolment of 3426 undergraduate students (27% male; 73% female) pursuing degrees in Early Childhood, Elementary, and Secondary Education [59]. The Early Childhood and Elementary Education programs include four tracks, each consisting of 24-credit elective subjects: Foreign Language (English), Physical Education, Music Education, and Special Education. Within the general education program, there are only two required 6-credit subjects related to diversity and inclusion, namely 'Attention to Specific Educational Needs' and 'Learning Disabilities and Developmental Disorders.' Equity and inclusion are considered transversal competencies in all teacher education degrees.

The US institution is recognized as one of the leading public research universities in the United States. According to its official records, the campus had 31367 undergraduate students and 12100 graduate students [60]. The College of Education (CE) enrolled 4823 students during the Spring semester of 2020, with around 76% of them being female. It is listed as the top public schools of education in the world [61] and No. 12 of the 277 best public graduate school institutions in the 2023 US News & World Report. The CE offers three undergraduate teaching majors: Early Childhood, Elementary Education, and Special Education. Within the Elementary Education program, students have the opportunity to specialize in Language Arts, Mathematics, Science, and Social Studies. On the other hand, the Special Education program offers a dual license preparation in both Elementary Education and PreK-12 Special Education.

This study focused on last-year degree student teachers seeking a degree in Elementary Education. Participants were selected using convenience sampling and were invited to participate in the survey during class sessions at the beginning of Spring semester in 2020. The study protocol received approval from the Institutional Review Board (IRB) of the XXX's College of Education and

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it was deemed exempt from review by the XX's Ethics Committee. After obtaining authorization from both institutions and instructors, as well as securing informed consent from the participants, the authors proceeded to administer a questionnaire to classroom groups during scheduled class sessions. To assure the representation of the entire last-year cohorts, a compulsory subject was selected for survey administration. Sample 1 (n = 271) was drawn from the Spanish College of Education from eight different groups representing the chosen subject. Their age ranged between 20 to 52 years (M = 21.77, SD = 3.60) and a majority were female (70%) and mono-cultural 99%. Thirty-seven percent of the sample had chosen to graduate with the mention of Special Education. Sample 2 (n = 59) was drawn from the US College of Education, from four different groups of the same cohort. Participants were between 19 to 31 years old (M = 21.44, SD = 2.11), with a majority being female (86%) and from diverse cultural and ethnic backgrounds (African-American, 3.4%; Asian, 11.9%; European-American, 66.1%; Hispanic-Latino, 1.7%; and Native American, 16.9%). All of them were on track to graduate with a dual licensing preparation in Elementary Education and PreK-12 Special Education.

### *3.2. Instrumentation*

The data collection process involved the utilization of two scales: The Teacher Efficacy for Inclusive Practice [53] and the Opportunity to Learning to Teach Inclusively [64].

*Teachers' Self-Efficacy for Inclusive Practice* (TEIP). It is a self-report assessment tool used to measure the self-efficacy of pre-service teachers to teach inclusively. The English version [53] consists of 18 items distributed in three subscales: Efficacy in Using Inclusive Instruction (6 items), Efficacy in Collaboration (6 items), and Efficacy in Managing Classroom Behaviour (6 items). The Spanish adaptation of the TEIP scale consists of 15 items and maintains the same three-factor structure [62]. Both versions have been demonstrated to be reliable and valid as shown in the studies conducted by Park et al. [63] and Authors [62]. In this study, the 15-item version of the instrument was used. Items were answered using a six-anchor Likert scale of 1 (*Strongly Disagree*) to 6 (*Strongly Agree*), which facilitated the calculation of individual scores by item, factors and a total score. A score approaching 6 on the total scale was indicative of a strong sense of self-efficacy specific to teaching inclusively, whereas a score of 1 denoted inadequacy or lack of confidence in own ability to teach in inclusive environments. Data from the present study showed that the TEIP scale has high reliability. Specifically, the alpha coefficient values for the US and Spanish samples were .93 and .92, respectively. Furthermore, internal consistency for Behaviour [B], Instruction [I] and Collaboration [C] was .88, .85, and .91 for the US sample, and .89, .84, and 85 for the Spanish sample. Correlations between factors were found to be high and statistically significant in both the US sample (I-B = .66, I-C = .78, B-C = .56) and the Spanish sample (I-B = .65, I-C = .65, B-C = .52), $p < .01$).

*Opportunity to Learning to Teach Inclusively* (OLTI) [64]. It measures the extent to which individuals have the opportunity to acquire the necessary skills and knowledge for inclusive teaching practices through 15 items that evaluate on a 4-point scale (0 = *None*, 1 = *Brief*, 2 = *In Depth*, 3 = *Extensive*) the chance to acquire strategies for addressing student diversity and inclusion during coursework. These strategies include identifying specific educational needs, proposing and utilizing intervention strategies to adapt instruction, developing an inclusive curriculum, and engaging in fieldwork within inclusive schools or classrooms. The internal consistency and content validity of the OLTI were tested with the samples of this study. The full-scale demonstrated good consistency, with Cronbach's alpha .92 for the whole sample, and .89 and. 88, for the Spanish and US sub-samples, respectively. Additionally, Lawshe's [65] content validity indices were high, with values of .97 and .98 for the Spanish and US sub-samples, respectively. The present study employed a cut-off threshold of 1.80 to categorize the respondents into two groupsthose who reported sufficient vs. insufficient opportunity to learn to teach inclusively,vs. insufficient .

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### 3.3. Data Analysis

*Confirmatory Factor Analysis* (CFA). Preliminary analyses were carried out to confirm the TEIP scale's factorial structure using the samples from this study. We tested the 18-item TEIP model [53] using single-group CFA with the full sample and, subsequently, with the sub-samples separately. Model fit was evaluated using multiple fit indices: The Tucker-Lewis Index (TLI), the Comparative Fit Index (CFI), and the Root Mean Squared Error of Approximation (RMSEA). Values above .90 for the TLI and CFI are deemed acceptable, whereas for RMSEA values below .10 reflect an acceptable fit [66].

*Invariance Testing.* After the separated single-group CFA, multi-group CFA was conducted to determine whether the best TEIP model obtained was equivalent across the two samples. Invariance testing compares the factorial model across different groups to examine whether it may hold the same meaning for all groups [67,68]. To determine measurement invariance, Brown recommends testing at least the equality of factor structure, factor loadings, and indicators intercepts. Any significant decrease in goodness of fit indices indicates that the instrument is non-invariant [67]. For determining whether the multi-group model was invariant, the recommendation of Cheung and Rensvold [69] was followed (ΔCFI no greater than +/- .015 and ΔRMSEA < .015).

*Mean comparison between groups*. Independent samples *t*-tests were used to compare mean scores of only two groups, while two-way between groups ANOVAs were conducted to examine the main effects of program type (generalist vs. combined) and opportunity to learn to teach inclusively (insufficient vs. sufficient) on pre-service teachers' perceptions of self-efficacy in using inclusive instruction, in collaborating, and in managing student behaviour. Statistical analyses were run using SPSS-28 and AMOS-23 software versions.

## 4. Results

### 4.1. Preliminary Analyses

Our results suggested a scale consisting of 15 items and a construct with the same three factors of the original TEIP, positively and statistically correlated ($p < .01$), that explained 64.65% of the total variance. We removed items 12, 13, and 19 from the 18-item model and validated the remaining 15-item three-factor model using a single-group CFA (Table 1), resulting in an acceptable fit to the data. The proposed factorial structure of 15-items adequately fitted the data for the Spanish ($\chi^2[103] = 443.80$, $\chi^2/gl = 4.31$; RMSEA = 0.111, CFI = .842 y TLI = .839) and for the US ($\chi^2[103] = 196.67$, $\chi^2/gl = 1.91$; RMSEA = 0.115, CFI = .882 y TLI = .877) samples, thus confirming an adequate construct validity of the 15-item version of the TEIP scale. All parameter estimates for this model were statistically significant.

**Table 1.** Goodness-of-fit indexes of measurement invariance across country.

| | $\chi^2$ | *df* | $\chi^2$ / *df* | CFI | TLI | RMSEA | ΔCFI | ΔRMSEA |
|---|---|---|---|---|---|---|---|---|
| *Single-group* | | | | | | | | |
| Spanish (*n* = 271) | 443.80 | 103 | 4.31 | .842 | .839 | .111 | | |
| US (*n* = 59) | 196.67 | 103 | 1.91 | .882 | .877 | .115 | | |
| *Multi-group* | | | | | | | | |
| Equal form | 646.32 | 206 | 3.14 | .841 | .838 | .081 | | |
| Equal factors | 647.27 | 208 | 3.11 | .841 | .840 | .080 | .000 | .001 |
| Equal indicator intercepts | 717.51 | 223 | 3.22 | .821 | .832 | .082 | .020 | .002 |

*Note.* $\chi^2$ = Chi-Squared; *df* = Degree Freedom; CFI = Comparative Fit Index; TLI = Tucker-Lewis Index; RMSEA = Root Mean Squared Error of Approximation.

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In addition, the multi-group CFA analysis provided evidence for the factor invariance across country of the 15-item TEIP (Table 1), confirming that the three-factor structure was equivalent in the Spanish and US samples and that the proposed model was valid for comparison. The goodness of fit estimates for the Spain and US samples were in the range of close to acceptable fit, with a relatively worse fit in the Spanish group of pre-service teachers. The tests of equal form and equal factor loadings yielded estimates of acceptable model fit (ΔCFI and ΔRMSEA < .01), whereas the test of equal indicator intercepts indicated a significant decrease in model fit in CFI (ΔCFI = .02) but not in RMSEA (ΔRMSEA = .002), leading to the conclusion that the 15-item TEIP model has non-equal indicator intercepts across the Spanish and US samples.

### *4.2. Perceptions of Self-Efficacy for Inclusive Practice*

Table 2 displays the descriptive statistics, mean and standard deviation, as well as *t*-tests used to compare each group of participants by TEIP factors and items. Overall, the participants reported a moderate level of self-efficacy ($M$ = 4.19 vs. 4.61 US, Spanish and US samples, respectively) on a scale of 1 to 6. This suggests that the respondents did not feel fully confident in their ability to effectively teach in inclusive classrooms. According to Cohen [70], there was a statistically significant difference in mean scores between the two groups. Spanish respondents reported feeling more insecure about their abilities compared to their US counterparts, with a large effect size (Cohen's $d$ = 0.737). By subscales, respondents expressed significantly less confidence in self-efficacy in managing behaviour ($M$ = 3.96 and 4.22) and in using inclusive instruction ($M$ = 4.23 and 4.72) than in collaboration ($M$ = 4.40 and 4.95) Spanish and US, respectively. These differences between the two groups were found to be statistically significant ($p$ < .01) with a large effect size. Therefore, upon graduation, pre-service elementary teachers who pursued a dual preparation program demonstrated a higher level of confidence in their ability to implement inclusive practices in all three TEIP domains than their counterparts from Spain enrolled in a generic TE program.

**Table 2.** Teacher self-efficacy for inclusive practice by country: Descriptives and comparison of means.

| | **Sub-samples** | ***M*** | ***SD*** | ***t*** | ***p*** | ***Cohen's d*** | ***Dir*** |
|---|---|---|---|---|---|---|---|
| **Total Scale** | Spanish | **4.19** | 0.71 | -4.00 | <.001 | 0.737 | US>SP |
| | US | **4.61** | 0.72 | | | | |
| **Factors** | | | | | | | |
| Managing Behavior | Spanish | **3.96** | 0.95 | -1.98 | .024 | 0.933 | US>SP |
| | US | **4.22** | 0.85 | | | | |
| Using Inclusive Instruction | Spanish | **4.23** | 0.75 | -4.35 | <.001 | 0.750 | US>SP |
| | US | **4.72** | 0.73 | | | | |
| Collaboration | Spanish | **4.40** | 0.92 | -4.21 | <.001 | 0.913 | US>SP |
| | US | **4.95** | 0.89 | | | | |
| **Items by Factors** | | | | | | | |
| ***Managing Behavior*** | | | | | | | |
| 7. Prevent disruptive behavior | Spanish | **3.70** | 1.12 | -3.31 | <.001 | 1.101 | US>SP |
| | US | **4.22** | 1.02 | | | | |
| 8. Control disruptive behavior | Spanish | **3.83** | 1.14 | -2.68 | .004 | 1.110 | US>SP |
| | US | **4.25** | 0.97 | | | | |
| 9. Clam a student who is disruptive | Spanish | **4.14** | 1.16 | -2.17 | .015 | 1.138 | US>SP |
| | US | **4.49** | 1.04 | | | | |
| 10. Get children to follow rules | Spanish | **4.25** | 1.00 | -2.65 | .004 | 0.980 | US>SP |

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| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | US | **4.63** | 0.87 | | | | |
| 11. Deal with st. physically aggressive | Spanish | **3.86** | 1.26 | 1.94 | .026 | 1.258 | SP>US |
| | US | **3.51** | 1.25 | | | | |
| ***Using Inclusive Instruction*** | | | | | | | |
| 2. Provide alternate explanation | Spanish | **4.72** | 0.93 | -3.32 | <.001 | 0.903 | US>SP |
| | US | **5.10** | 0.76 | | | | |
| 3. Accommodate indiv lear needs | Spanish | **4.06** | 1.05 | -3.99 | <.001 | 1.043 | US>SP |
| | US | **4.66** | 0.99 | | | | |
| 4. Gauge student comprehension | Spanish | **4.35** | 0.98 | -1.77 | .039 | 0.968 | US>SP |
| | US | **4.59** | 0.91 | | | | |
| 5. Challenges capable students | Spanish | **3.95** | 0.96 | -7.25 | <.001 | 0.945 | US>SP |
| | US | **4.93** | 0.87 | | | | |
| 6. Get students to work together | Spanish | **4.66** | 0.94 | -1.98 | .024 | 0.941 | US>SP |
| | US | **4.93** | 0.96 | | | | |
| 20. Adapt school/state-wide assess | Spanish | **3.75** | 1.17 | -1.99 | .024 | 1.187 | US>SP |
| | US | **4.08** | 1.26 | | | | |
| ***Collaboration*** | | | | | | | |
| 15. Work jointly withother professionals | Spanish | **4.44** | 1.08 | -3.77 | <.001 | 1.069 | US>SP |
| | US | **5.00** | 1.03 | | | | |
| 16. Get parents involved in school | Spanish | **4.44** | 1.06 | -0.82 | .207 | | |
| | US | **4.56** | 1.04 | | | | |
| 17. Make parents feel comfortable | Spanish | **4.25** | 1.11 | -6.02 | <.001 | 1.087 | US>SP |
| | US | **5.10** | 0.96 | | | | |
| 18. Collaborate in designing edu plans | Spanish | **4.47** | 1.18 | -4.64 | <.001 | 1.146 | US>SP |
| | US | **5.14** | 0.96 | | | | |

Scale range 1-6 (*Min.* 1, *Max*. 6, midpoint 3.50); *df* (328).

Comparison of individual items revealed that across the various items comprising the TEIP scale, respondents from the US consistently scored significantly higher compared to their Spanish counterparts (see Table 2). Exceptions were found in Item 11, 'Efficacy in dealing with students who are physically aggressive', with Spanish respondents scoring significantly higher than US pre-service teachers ($M$ = 3.86 vs. 3.51) and in Item 16, 'Get parents involved in school', with no statistically significant differences found between groups. These results suggest that respondents rated their ability to effectively teach inclusively as moderate. However, upon closer examination, it became evident that their confidence in managing student behaviour and implementing inclusive instructional strategies was notably insufficient. Specifically, none of the items of these dimensions of efficacy achieved a score of 5, with the exception of Item 2 'Provide alternative explanations/examples when students are confused.'

### *4.3. Differences in Self-efficacy Across Program and Opportunity to Teach Inclusively*

The analysis of mean scores in the TEIP also revealed that opportunity for learning to teach inclusively significantly affects the ability to teach in ways that are inclusive of all learners, regardless of whether the program is a general or dual certification program (Table 3). Statistically significant differences were found in the three domains of self-efficacy, self-efficacy in managing classroom behaviour [$F(3, 326) = 27.0$, $p = .001$], self-efficacy in using inclusive instruction [$F(3, 326) = 32.92$, $p = .001$], and self-efficacy in collaboration [$F(3, 326) = 23.77$, $p = .001$], the effect size being large (eta

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squared = .076, .092, and .068, for behaviour, instruction, and collaboration, respectively). A more detailed description of the findings by individual items is included in Appendix A.

**Table 3.** Pre-service teachers' self-efficacy beliefs for inclusive practice by type of program (general vs. dual) and opportunity (sufficient vs. insufficient) to learning to teach inclusively (ANOVA 2 x 2).

| | General | | Dual | | *Total* | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | *M* | *SD* | *M* | *SD* | *M* | *SD* | *SV* | *F* | *p* | *Eta* |
| **Managing Behaviour** | | | | | | | | | | |
| Insufficient | **3.77** | 0.93 | **3.88** | 0.93 | **3.78** | 0.93 | Program | 0.32 | .570 | .001 |
| Sufficient | **4.66** | 0.66 | **4.39** | 0.77 | **4.55** | 0.71 | Opport. | 27.0 | **<.001** | .076 |
| | | | | | | | P x O | 1.98 | .161 | .006 |
| **Inclusive Instruction** | | | | | | | | | | |
| Insufficient | **4.10** | 0.73 | **4.34** | 0.84 | **4.12** | 0.75 | Program | 2.69 | .102 | .008 |
| Sufficient | **4.79** | 0.55 | **4.91** | 0.60 | **4.84** | 0.57 | Opport. | 32.92 | **<.001** | .092 |
| | | | | | | | P x O | 0.28 | .590 | .001 |
| **Collaboration** | | | | | | | | | | |
| Insufficient | **4.28** | 0.91 | **4.44** | 1.06 | **4.29** | 0.93 | Program | 3.71 | .055 | .011 |
| Sufficient | **4.84** | 0.78 | **5.21** | 0.65 | **4.99** | 0.76 | Opport. | 23.77 | **<.001** | .068 |
| | | | | | | | P x O | 0.59 | .445 | .002 |

Scale range 1-6 (*Min.* 1, *Max*. 6, midpoint 3.50); SV = Source of variation*; df* (3, 326).

## 5. Discussion

This study investigated the perceived self-efficacy for inclusion of pre-service elementary school teachers after graduation in the US and Spain and the extent to which their ability varied depending on the type of TE program and the opportunity they had to learn to teach inclusively. o were As a preliminary measure in conducting a comparative study, the construct validity and factor invariance of the TEIP scale across country were assessed. This was done in recognition of the potential need for modifications to measurement instruments when they are applied in new contexts or translated into languages other than the original [71]. Therefore, we conducted separate analyses using single-group CFA to assess the fit of the proposed 15-item three-factor TEIP model to the data collected from pre-service elementary teachers in Spain and the US. Subsequently, multi-group CFA was used to examine the TEIP measurement invariance, specifically the equality of factors, items and indicator interceptsacross the two sub-samples. Based on the results obtained from both single and multi-sample CFAs, it concluded that the reduced 15-item and three-factor version of the TEIP is a valid and reliable measure for assessing teacher capacity to teach using an inclusive approach, the three-factor structure equivalent across the two samples. Additionally, our study found evidence of configural invariance, suggesting that both Spanish and US pre-service elementary teachers conceptualize efficacy for inclusion in the same three-factor dimensions (behaviour, instruction, and collaboration). We also found evidence of metric invariance, which implies that both Spanish and US pre-service elementary teachers calibrated the items equivalently. However, our analysis did not find evidence of full scalar invariance, indicating that the item intercepts were not totally invariant between the groups of pre-service teachers from Spain and the US. Given the absence of prior research on the cross-country measurement invariance of the TEIP using samples of elementary pre-service teachers from the US and Spain, it is recommended for future studies to investigate this aspect using bigger and more representative samples. Although we only find evidence of partial scalar invariance of the TEIP between Spanish and US elementary pre-service teachers, it is still possible to conduct cross-national comparisons. Milfont and Fischer [72] argue that achieving full measurement invariance is improbable in practical applications, so it is possible to carry out cross-group

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comparisons even using not fully measurement invariance. In light of our findings, we feel confident that the 15-item TEIP can be deemed to operate equivalently across pre-service elementary teachers from Spain and the US. Therefore, given the known psychometric soundness of the TEIP, these have the potential to add evidence to its construct validity and, to a certain extent, to its factor invariance in relation to the Spanish and US adaptation.

Despite the finding of non-invariant intercepts across the Spanish and US samples, the instrument remains valuable for comparing the self-efficacy of elementary pre-service teachers in the US and Spain in regards to inclusion, abeit with appropriate caution. The results of study provide empirical support to the existing literature, adding evidence to the claims that future teachers often graduate without the necessary confidence and preparation to effectively navigate the complexities associated with inclusive education. The participants' level of self-efficacy in providing quality education for all was found to be only moderate, with specific areas of concern being the management of classroom behavior and the implementation of inclusive instructional practices. This should not be surprising considering that respondents indicated in the items of the OLTI scale that they had not received enough preparation on inclusive education. In fact, it was found that a significant proportion of respondents from the XXX and the XX, 50% and 34%, respectively, indicated that they had not had enough opportunities for learning to teach inclusively. Furthermore, an overwhelming majority of respondents, 61% from the US and 92% from Spain, claimed that their programs should contain more specific content on diversity and inclusion. espondents emphasized the need for more practical learning experiences, as opposed to theoretical learning approaches, in order to enhance their understanding and application of inclusive teaching principles. This is consistent with previous studies that reveal that teacher candidates finish their initial training unprepared to meet the requirements of inclusive quality education [22,40,43,44,58]. Traditional TE programs typically do not fully immerse pre-service teachers in school settings until their student teaching practicum. Hence, given the current definition of high-quality education as one that differentiates for the academic and socio-emotional needs of all students [25], initial teacher preparation should be transformed and adapted to the evolving demands and expectations of future teachers. The existing body of research literature on inclusion demonstrates that more coursework on inclusive education and practicum experience are positively related to teachers' sense of self-efficacy to individualize instruction, provide accommodations, and adapt content standards [44]. Therefore, more practicum experiences in inclusive classrooms are needed to provide pre-service teachers the tools, resources and experience to effectively teach all students in regular classroom settings [1,36–38].

Our findings also showed evidence of significant differences in perceptions of self-efficacy for inclusion between Spanish and US respondents. Specifically, Spanish elementary pre-service teachers consistently reported lower levels of confidence in their ability to manage classroom behaviour, using inclusive teaching practices, and collaborating with colleagues and families than their counterparts from the US. This observed outcome is to be expected based on two factors: firstly, special/inclusive education is more deeply rooted in TE programs in the US compared to Spain, and secondly, the respondents from the US were receiving training in a dual certification program encompassing both general and special/inclusive education, whereas the Spanish participants were enrolled in a program focused solely on general education. Nevertheless, the results shown here are in contradiction to the conclusions drawn by Kim [55], whose study indicated that the type of program contributed to improving attitudes towards inclusion, but did not significantly affect teacher self-efficacy in inclusive practice. This observation prompts us to consider that, in addition to type of training program (general or dual certification), there may be other factors that could provide further insight into the differences found (e.g. hours of coursework on diversity/inclusion, understanding of inclusive education and its practical implications, tradition in the response to diversity/inclusion). Further research is needed to determine how these variables could potentially impact teacher self-efficacy for the practice of inclusion. When examining the TEIP's individual items, which outline the type of knowledge and skills teachers may need for the successful implementation of inclusion, we observe that, with the exception of four skills (Item 2 'Provide alternative explanations', Item 15

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'Work jointly with other professionals', Item 17 'Make parents feel comfortable when they come to school' and Item 18 'Collaborate in designing educational plans', that received scores of 5 or close to 5, the respondents did not appear to have the sufficient mastery of these skills and competencies. This information could be useful to guide elementary school teachers' curriculum development and improve their self-efficacy for inclusive teaching. Once improvement needs have been identified, faculty can determine *how* and *where* goals and competencies can be met. There are examples to guide this process of improvement, such as the Inclusion Practice Project in Scotland [73], the NCSE's Initial Teacher Education for Inclusion Project in Ireland [74], and the framework for preparing teachers proposed by Villegas et al. [75], to name a few.

A further significant finding was that, regardless of type of TE program, perception of self-efficacy for inclusive practice was affected by opportunity for learning to teach inclusively. Our data indicates that teacher self-efficacy was substantially higher among respondents who reported receiving sufficient opportunities to learn to teach inclusively during their initial training than among those who received insufficient opportunity. This result contributes to confirm, as suggested by Shani and Hebel [38] and Lucas and Frazier [37], that: (1) coursework on inclusion and direct contact through practicum experience during initial training are essential components for inclusive quality education], and that (2) a truly inclusive education must include these components into curricula regardless of program.

### *5.1. Implications*

These findings have several implications both for practice and research. First, we suggest collecting more survey data from a variety of colleges of education across the United States and Spain in order to obtain more meaningful results. Larger and more representative samples would allow for more generalized claims regarding the self-efficacy of elementary education pre-service teachers in these countries. We also recommend surveying general education teachers from other grade levels (Early Childhood, Secondary Education), including special/support pre-service teachers, who must collaborate with regular classroom teachers to adapt instruction for students with diverse support needs. A survey of general and special education teachers at all grade levels, preferably complemented with interviews, would provide not only more robust data**,** but also a variety of perspectives on teacher self-efficacy for inclusion in US and Spain training institutions. Second, we suggest further research on teacher preparation programs and the curriculum offered by universities. It is necessary to delve deeper into the substance of the programs and courses. The ability to evaluate the preparedness of pre-service teachers in integrating students with significant educational needs into general education classrooms is crucial. Clearly, there is a need for additional research to explore TE programs in depth and to determine the characteristics of effective preparation programs, including the content that is most essential for pre-service teachers to feel prepared. Furthermore, it would be important to explore the various methods of content delivery. Programs should offer and require courses that teach explicit inclusion strategies in the respective subjects/content areas, as well as practicum experiences in inclusive classrooms. This would provide pre-service teachers with hands-on experience prior to entering their own classrooms. Third, it is imperative to acknowledge the high statistically significant differences in self-efficacy among elementary pre-service teachers who had received sufficient or insufficient opportunities for learning to teach inclusively. In light of this, teacher preparation programs should prioritize the provision of learning and practical experiences that enable pre-service teachers to acquire and hone skills related to behavior management, inclusive instructional strategies, and collaborative teamwork [1].

### *5.2. Limitations*

This study has some limitations that must be considered. First, the scope of this study was confined to only two TE institutions, which may weaken reproduction of results in dissimilar colleges and cultural settings. Due to the imbalanced size of the samples, which exhibit a bias towards women and lack of representativeness of the population, it is uncertain whether the findings can be

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generalized to other teacher preparation contexts and/or to other pre-service teacher samples from elementary education programs. The educational settings of TE programs are vastly different all over the globe, so a replication of this study in other countries may yield very different and valuable results. Second, the survey data was self-reported. Hence, given the controversial nature of the survey questions, it is possible that participants would have selected answers that they perceived aligned with prevailing notions of inclusion, rather than reflecting their personal beliefs on their capacity to teach all students in inclusive settings. Moreover, it is possible that the closed-ended questions utilized in the survey may have constrained the responses of pre-service teachers. Consequently, incorporating a qualitative component within a mixed methods study could provide a more comprehensive understanding of participants' self-efficacy. Through conducting interviews and in-depth case studies, more specific and relevant variables may be revealed, which may then be explicitly addressed through targeted training interventions. This could provide supplementary information that universities and instructors could utilize to develop more inclusive TE programs. Third, it is also important to highlight that this study only provides information about the respondents' sense of self-efficacy for inclusion in general terms; that is, not controlling modulating variables (e.g. hours of training in special/inclusive education, understanding of inclusion, quality of TE programs). Therefore, it is recommended that future studies explore the potential impact of these variables on self-perceptions of efficacy for sustainable quality education for all and empirically document the findings.

## 6. Conclusion

International comparable data on teacher indicators to measure quality education for all is surprisingly scarce [22]. Measuring and comparing teacher self-efficacy for sustainable development of inclusion should be part of these indicators that will help mark the level of quality of education for all. Inclusive teachers need more pedagogical training than ever before, if they are to successfully educate all students. The strengths and weaknesses identified in their ability to teach all upon graduation can inform core curriculum to better prepare elementary school teachers for inclusion. Our hope is that all new qualified school teachers have the sensitivity, expectations, desire and preparation to effectively teach, assess, and manage diverse learners in their classrooms, and sustain inclusion regardless of the differential characteristics of each and every one of the students. It can be inferred from our findings that both participating institutions can and should do more to prepare inclusive teachers, particularly the Spanish one, that, in view of the findings, it obtained worse results in regards the ability of its teacher graduates to be inclusive professionals. Areas of need and suggestions to improve include: (1) create an institutional sustainable competency framework for diversity and inclusion; (2) set standards for integrating SDG4 principles in the degree curriculum; (3) analyze the content of existing curriculum and coordinate course requirements for inclusion; (4) set a plan for theoretical and practical content development including field work and direct experience through practicum; (5) provide faculty awareness of TE for sustainability in regards to quality and equity for all; (6) offer real opportunities for faculty practical teaming experiences and innovation to integrate diversity/inclusion-related course content and strategies into teaching in their respective subjects; (7) create a specialized ESD4 faculty community to share experiences and best practices; and (8) monitor progress. Measurable progress in these areas would contribute to reducing the gap between ill preparation for inclusion and the global mandate for equitable quality education articulated in UN [9] and SDG4.

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**Informed Consent Statement:** Informed consent was obtained from all subjects involved in the study.

**Data Availability Statement:** The data presented in this study are available on request from the corresponding authors.

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## Appendix A. Pre-Service Teachers' Self-Efficacy Beliefs for Inclusive Practice by Type of Program and Opportunity to Learning to Teach Inclusively (Individual Items ANOVAs 2 x 2)

| | Whole Sample | | Spanish | | US | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| *Items* | *M* | *SD* | *M* | *SD* | *M* | *SD* | *SV* | *F* | *p* | *Eta* |
| **Managing Classroom Behavior** | | | | | | | | | | |
| 7. Prevent disruptive behavior. | | | | | | | | | | |
| Insufficient | **3.47** | 1.08 | **3.95** | 1.05 | **3.51** | 1.08 | Progr. | 0.83 | .362 | .003 |
| Sufficient | **4.54** | 0.83 | **4.36** | 0.99 | **4.47** | 0.89 | Opp. | 21.28 | **<.001** | .061 |
| | | | | | | | P x O | 4.26 | **.040** | .013 |
| 8. Control disruptive behavior. | | | | | | | | | | |
| Insufficient | **3.61** | 1.10 | **3.85** | 0.93 | **3.63** | 1.08 | Progr. | 0.04 | .835 | .000 |
| Sufficient | **4.63** | 0.90 | **4.46** | 0.94 | **4.56** | 0.92 | Opp. | 25.15 | **<.001** | .072 |
| | | | | | | | P x O | 1.57 | .211 | .005 |
| 9. Clam a student who is disruptive. | | | | | | | | | | |
| Insufficient | **3.95** | 1.15 | **4.20** | 1.15 | **3.97** | 1.15 | Progr. | 0.03 | .853 | .000 |
| Sufficient | **4.82** | 0.89 | **4.64** | 0.96 | **4.75** | 0.92 | Opp. | 14.79 | **<.001** | .043 |
| | | | | | | | P x O | 1.59 | .208 | .005 |
| 10. Get children follow class rules. | | | | | | | | | | |
| Insufficient | **4.09** | 1.00 | **4.30** | 1.13 | **4.11** | 1.01 | Progr. | 0.20 | .659 | .001 |
| Sufficient | **4.88** | 0.73 | **4.79** | 0.66 | **4.84** | 0.70 | Opp. | 19.32 | **<.001** | .056 |
| | | | | | | | P x O | 1.01 | .315 | .003 |
| 11. Deal with physically aggresive. | | | | | | | | | | |
| Insufficient | **3.71** | 1.26 | **3.10** | 1.16 | **3.65** | 1.26 | Progr. | 11.95 | **<.001** | .035 |
| Sufficient | **4.44** | 1.09 | **3.72** | 1.25 | **4.15** | 1.21 | Opp. | 12.40 | **<.001** | .037 |
| | | | | | | | P x O | 0.09 | .764 | .000 |
| **Using Inclusive Instruction** | | | | | | | | | | |
| 2. Provide an alternate explanation. | | | | | | | | | | |
| Insufficient | **4.62** | 0.95 | **4.85** | 0.99 | **4.64** | 0.95 | Progr. | 1.64 | .202 | .005 |
| Sufficient | **5.11** | 0.75 | **5.23** | 0.58 | **5.16** | 0.69 | Opp. | 9.67 | **.002** | .029 |

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| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | P x O | 0.14 | .710 | .000 |
| 3. Design tasks to accommodate LN | | | | | | | | | | |
| Insufficient | **3.94** | 1.08 | **4.20** | 1.06 | **3.96** | 1.08 | Progr. | 3.97 | **.047** | .012 |
| Sufficient | **4.53** | 0.78 | **4.90** | 0.88 | **4.68** | 0.84 | Opp. | 16.40 | **<.001** | .048 |
| | | | | | | | P x O | 0.12 | .728 | .000 |
| 4. Gauge student comprehension. | | | | | | | | | | |
| Insuffic | **4.21** | 0.99 | **4.25** | 1.02 | **4.22** | 0.99 | Progr. | 0.02 | .897 | .000 |
| Sufficient | **4.84** | 0.75 | **4.77** | 0.81 | **4.81** | 0.77 | Opp. | 15.29 | **<.001** | .045 |
| | | | | | | | P x O | 0.14 | .713 | .000 |
| 5. Challenges for capable students. | | | | | | | | | | |
| Insufficient | **3.77** | 0.94 | **4.70** | 0.98 | **3.85** | 0.88 | Progr. | 23.68 | **<.001** | .068 |
| Sufficient | **4.63** | 0.70 | **5.05** | 0.79 | **4.80** | 0.76 | Opp. | 19.13 | **<.001** | .055 |
| | | | | | | | P x O | 3.42 | .066 | .010 |
| 6. Get students to work together. | | | | | | | | | | |
| Insufficient | **4.54** | 0.94 | **4.65** | 1.14 | **4.55** | 0.96 | Progr. | 0.05 | .828 | .000 |
| Sufficient | **5.12** | 0.76 | **5.08** | 0.84 | **5.10** | 0.79 | Opp. | 12.41 | **<.001** | .037 |
| | | | | | | | P x O | 0.29 | .591 | .001 |
| 20. Adapt school/state-wide assess. | | | | | | | | | | |
| Insufficient | **3.54** | 1.14 | **3.40** | 1.23 | **3.53** | 1.15 | Progr. | 0.38 | .538 | .001 |
| Sufficient | **4.51** | 0.95 | **4.44** | 1.14 | **4.48** | 1.03 | Opp. | 32.93 | **<.001** | .092 |
| | | | | | | | P x O | 0.04 | .842 | .000 |
| **Collaboration** | | | | | | | | | | |
| 15. Work jointly with other staff. | | | | | | | | | | |
| Insufficient | **4.35** | 1.09 | **4.45** | 1.19 | **4.36** | 1.10 | Progr. | 3.66 | .057 | .011 |
| Sufficient | **4.75** | 0.97 | **5.28** | 0.83 | **4.97** | 0.95 | Opp. | 14.21 | **<.001** | .042 |
| | | | | | | | P x O | 1.71 | .193 | .005 |
| 16. Get parents involved in school. | | | | | | | | | | |
| Insufficient | **4.31** | 1.05 | **4.00** | 1.21 | **4.29** | 1.07 | Progr. | 1.28 | .259 | .004 |
| Sufficient | **4.89** | 0.96 | **4.85** | 0.81 | **4.87** | 0.90 | Opp. | 19.95 | **<.001** | .058 |
| | | | | | | | P x O | 0.69 | .409 | .002 |
| 17. Make parents feel comfortable. | | | | | | | | | | |
| Insufficient | **4.10** | 1.11 | **4.70** | 1.26 | **4.15** | 1.13 | Progr. | 11.24 | **<.001** | .033 |
| Sufficient | **4.81** | 0.95 | **5.31** | 0.69 | **5.01** | 0.89 | Opp. | 16.03 | **<.001** | .047 |
| | | | | | | | P x O | 0.10 | .759 | .000 |
| 18. Collaborate designing edu plans. | | | | | | | | | | |
| Insufficient | **4.35** | 1.18 | **4.60** | 1.09 | **4.37** | 1.18 | Progr. | 4.57 | **.033** | .014 |
| Sufficient | **4.91** | 1.07 | **5.41** | 0.75 | **5.11** | 0.98 | Opp. | 15.39 | **<.001** | .045 |
| | | | | | | | P x O | 0.51 | .478 | .002 |

Scale range 1-6 (1 = Strongly Disagree; 2 = Disagree; 3 = Disagree Somewhat; 4 = Agree Somewhat; 5 = Agree; 6 = Strongly Agree).

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