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### Views of Students on Inclusive Cultures, Policies and Practices in the University Context

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#### Abstract

The present study analyzed the importance student teachers' attitudes towards inclusion and multiculturalism in Teacher Education, Pedagogy and Master's degree at the University of La Laguna (ULL). Pre-service teachers were classified by the following socio-demographic variables: sex, age, experiences with different people and intercultural experiences, grades and study cycles. The study sample consisted of 1,667 undergraduate students. The "Questionnaire on Attitudes Toward Inclusion and Intercultural" (QAI) was based on the "Index for Inclusion" (Booth & Ainscow, 2000). Three dimensions composed it equally: inclusive cultures, policies and practices for testing hypothesis about the differences among students. Socio-demographic variables analyzed in the dimensions of QAI revealed the existence of different student attitudes towards inclusion. These findings implied changes in the curriculum of all degrees in the School of Education at the ULL. This study recommended inclusive education as a basic value for pre-service teacher trainees.

**Keywords:** Attitudes; Inclusion; Integration; Intercultural.

#### Introduction

Inclusion educational is attentive to certain human beings who share a past of isolation or social exclusion, such as students with incapacity or students with communication and emotional difficulties. Educational institutions currently legitimate the global movement that calls for effectiveness and efficiency of inclusive schools or new ways of balancing the teaching-learning process planning (Rossello, 2010). Other researchers suggest that school teaching should emphasize facets of student self-determination self-control skills learning processes. Wehmeyer (2009, p. 60) suggested components for inclusive processes (e.g., "signal a goal, solve a problem, self-defense, self-control, etc."). Also authors recommend how to help students to develop independence and strategies of production. The educational challenge is to provide knowledge that promotes school leaders' use of research-based inclusive practices that can be delivered with fidelity.

#### Review of Literature

Thus, researchers have studied children attitudes to peers with disabilities finding a disappointing discovery. According to De Boer, Pil, Minnaert, and Post (2014, p. 80), "elementary school students hold the most negative attitudes towards children with intellectual and severe physical and intellectual disabilities than towards students with a physical disability". Often, many students having moderate deficiencies require intensive instruction ("one-to-one assistance" from a teacher assistant) to master academic competencies (O'Rourke & Houghton, 2008). Therefore, early intervention is key to precluding academic failure. Authors said that there were "two variables" that could explain the responsibility of instructing students at risk: one was the concentration of educators in a school, and the other was special education teachers' workload in individualized education programs (Giangreco, Suter, & Hurley, 2011). These arguments enlighten component analyses of inclusive education programs. However, Darretxe, Goikoetxea and Fernandez Gonzalez (2013) have casted doubts on that assumption. The revised studies about the Basque Primary and Secondary education, recommended transformations at various levels including the curriculum, structures and, also and most important, adjustments in personal thoughts and teaching performances.



A great deal of research was requested to examine teachers' attitudes, values, feelings and basic expectations towards the integration of inclusion in schools in geographically distant cultures in Western countries. Australian studies on inclusion attitudes of preschool principals, teachers, psychologists and administrators had explored a multitude of factors on ability thinking and teacher responsibilities. Researchers had considered that their attitudes might influence upon teacher recognition of inclusion beliefs, such as the quality of their working experiences with different groups of exceptional learners, as well as training content, exercise intensity, and frequency of communication with the school community (Avramidis & Norwich, 2002). More often, some of the most influential factors seemed to be found on the nature of deficit disorders (variables relating to children), than in teacher descriptions (variables of sex, age teaching experience, grade level taught, experience contact with children with special educational needs, training, teaching beliefs and socio political vision). Another factor is clearly assigned to environment-related variables (human and physical resources of support). Schoolchildren have rights, entitlements, and are esteemed members of their classroom and school groups. Consequently, inclusive policies are embracing well-defined roles and tasks, actions and strategies for organizing, supervising and assessing education programs, maintenance and deliberation. Thus, Santhanam and Hicks (2004, p. 98) underlined three important socio-demographic variables on students: "Perception of inclusion may depend on discipline area, course year level and student gender". In addition to the specific university training, the human supports variable appears repeatedly as model of comprehensive teachers' attitudes. Socialization of teachers in cognitive, affective and behavioral variables unchanged cognitive processes of the children's social-cognitive behavior (De Boer, Pijl, Post, & Minnaert, 2012). School curriculum improvement should change alongside teachers' training concerning their awareness of inclusion and its values. Inclusive policies established clear roles and responsibilities, procedures and guidelines for coordinating, monitoring and evaluating education programs, support and reflection. According to Unianu (2012), socio-demographic variables of Romanian teachers (classified by age, sex, professional environment, number of years teaching in the field, number of years teaching in primary school level) should be combined within teacher education programs in order to create an increased "quality awareness" in knowledge, practice and prejudices of inclusive education.

Lessons learned about school teaching showed that reduction in class size and quality training of teachers is perceived as key topics for an effective inclusion development (Lambe & Bones, 2006). Findings research on teachers' attitudes toward inclusion of students with disabilities discovers disturbing effects. Thus, Cook, Cameron and Tankersley (2007, p. 237) highlighted and clarified teachers' unresponsiveness to inclusion: "General educators' perceived lack of experience, knowledge, or responsibility regarding the instruction of students with disabilities (see Cook et al., 2000), rather than teacher disregard, may explain the higher indifference toward included students with disabilities." There is certain agreement that the opinion of schoolteachers is that they are not sufficiently equipped to teach in inclusive classrooms, because inclusion requires a large vision and specific teaching competencies for all teachers. Meanwhile, Costello and Boyle (2013, p. 141) wrote that attitudes towards inclusive education proved to be positive, although this effect diminished over time. However, "a further concern is that pre-service secondary teachers are much less positive in their attitudes towards their training and perceived competence than towards other aspects of inclusive education". Besides, it is not difficult to combine the concepts of inclusive education and intercultural education when they implement strategies in a favorable immigration school context. Thus, Vlachou, Didaskalou and Voudouri (2009, p. 195) have shown that teachers clung to the textbook, because there were a number of factors acting as barriers to the introduction of curricular adaptations in Greek primary schools, such as "a) lack of time, b) pace and pressures of the curriculum / textbook, c) lack of knowledge and training, (...) linked to the belief that similarity and equal treatment ensures equality". In line with these findings, attitudes to inclusion of pre service teacher training students are insufficiently known (Kim, 2011). Therefore, continuing education must help teachers to change their preconceptions, beliefs and attitudes, because teachers' initial education and in-service training for inclusion are inadequate to prepare them with inclusive approaches and consequently, there is an stated necessity for in-service training (Symeonidou & Phtiaka, 2009).

This review opens spaces of inquiry into the effects of attitudes toward inclusion of future professionals of teaching in schools. However, it is unknown where attitudes of student teachers are related to their socio-demographic (age and sex) and environmental factors (intercultural and disability experiences, qualifications and study cycle). This issue led to the question:

Research Question 1: What are the differences in attitudes towards inclusion as socio-demographic and environmental factors of students in the Early Childhood Education (EChE) and Primary Education (PE) degrees, Pedagogy Degree (PG) and Master's degree in Teacher Education (MTE) measured by the "Questionnaire on Attitudes toward Inclusion and Intercultural" (QAI)?

## Methodology

The hypothesis of this study stated that there were differences in EChE, PE, GP and MTE students' attitudes to inclusion in dimensions and categories of QAI due to the following independent variables: age, sex, intercultural and disability experiences and study cycle.



## Participants and Context

All participants (N = 1,667) had been trained in the Faculty of Education at the University of La Laguna (ULL). Demographic information was as follows: the highest percentage of participation was voluntary for women (72.5%) compared to men (27.5%). Participants had a mainly aged between 20-22 years (45.4%) followed by students located in the old cycle of 23-25 years (n = 39.2%). Sample members were divided into degrees and cycles of studies. Thus, the larger sample flood was enrolled in PE (34.6%), followed by EChE (31.7%). Together, 39.5% belonged to the first cycle of the degree program and 34.6% to the second cycle. The increased heterogeneity of students attended the PG (21.8%) ending with the novel contribution of the students of the MTE (11.9%). Data indicated that most of students did not have experience in the intercultural field, or it was low. 93.6% had between 0 to 3 years of experience, while 6.3% had some experience in intercultural environment between 4 to 10 years. Regarding teaching children with disability, 98.1% said they had a practice experience from 0 to 3 years, while 1.9% had a training practice between 4 to 10 years. In order to demonstrate the relevance of the study, the sample of students from the Faculty of Education provided a reasonable ecological and external validity (generalization).

## Attitude Instruments

The measurement of attitudes was conducted generally across scales or questionnaires designed ad hoc or through adaptations of existing ones. In the first situation, researchers have made assessments of the psychometric properties of attitude instruments to establish their reliability and validity (De Boer, Timmerman, Pijl, & Minnaert, 2012). Respecting other questionnaires, the Spanish adaptation of the "Index for Inclusion" entitled "Guidelines for the evaluation and improvement of inclusive education" (Sandoval López, Miquel Duran, Giné, & Echeita, 2002) had been a pioneering tool to measure attitudes toward inclusion in schools, whose first adaptations in three Spanish communities were identified by Duran, Echeita, Giné, Miquel, Ruiz, & Sandoval (2005). This guide also has settled and used to measure attitudes toward inclusion in preschools (Booth, Ainscow, & Kingston, 2006).

Along with collecting demographic information on age, sex, educational degrees, cycle of studies, intercultural experience and experience with special education needs, the measure included the "Questionnaire on Attitudes toward Inclusion and Intercultural" (QAII). Alegre and Villar (2011, 2015) used QAII as an adaptation of the "Index for Inclusion". QAII emphasized social values and improved awareness of students' needs. It is a 45-item questionnaire that measures attitudes of students and conceptualizes them regarding inclusion and multiculturalism in three dimensions and six categories on a 4-point Likert-type scale assuming that the strength/intensity of attitude experiences are lineal: ranging from 1 (*nothing important*) to 4 (*very important*), as other authors had recommended (De Boer, Pijl, Post and Minnaert, 2012; Swain, Nordness and Leader-Janssen, 2012; Specht et al., 2016). The three dimensions and six categories of QAII were the following:

1. Creating inclusive cultures (dimension A). This dimension is arranged in 13 items. Its aim is to promote values conducive to the improvement and development of a safe community. Items were distributed into two categories: Building community and Establishing inclusive values.
2. Producing inclusive policies (dimension B). This dimension is comprised of 15 items. Its objective is the requirement to guarantee success in the measures and implications for teachers to ensure the inclusion of students. The items have been placed in two categories: Developing the school for all and Organising support for diversity.
3. Evolving Inclusive Practices. This dimension includes 17 items. Its aim is to advance the purposes of collaboration, cooperation and involvement of the educational community. The items are combined into two categories: Orchestrating learning and Mobilising resources.

## Data Analysis: Validation Procedure

QAII was administered anonymously and voluntarily to the entire sample of students being completed during class hours in their degree program. Participants were provided time in class to complete the survey. Information about the investigation project's aims and methods was read to the students.

The central QAII analysis involved a confirmatory factor analysis, whose phases were the following: QAII definition, data collection, intercorrelations matrix, extraction of factors determining the number of factors, factor rotation, interpretation and validation of factors model; in short, to elucidate the structure of regularity and trends in the items of the QAII or the "underlying structure of observed variables" (Mvududu & Sink, 2013, p. 79). It was used an analysis of the key factors for extracting components in the initial solution, and a varimax rotation for the final solution. Weights equal to or less than 0.30 were suppressed for moderate or high weights, and similarly, factors comprising at least three items were acknowledged. The items were grouped into eight factors explaining 47.6% of variance. The first factor (eigenvalue: 8.243%) was composed of seven of the 17 items of Orchestrating learning and Mobilising resources of dimension C. The second factor (eigenvalue: 15.085%) was formed by six of the 15 items corresponding to categories Developing the school for all and Organising support for diversity of the dimension B. The third factor (eigenvalue: 21.918%) was comprised of seven items of categories Organising support for diversity of dimension B and Orchestrating



learning of dimension C. The fourth factor (eigenvalue: 27,836%) was created with four items of the same categories of the third factor. The fifth factor (eigenvalue: 32,917%) was composed of three items in categories Establishing inclusive values of dimension A and Developing the school for all of dimension B. The sixth factor (eigenvalue: 37,981%) was composed of three items in the categories Building community and Establishing inclusive values of dimension A and Organising support for diversity of dimension B. The seventh factor (eigenvalue: 42,579%) was formed by five items in categories Building community and Establishing inclusive values of dimension A and Orchestrating learning of dimension C. The last factor (eigenvalue: 47,064%) was composed of three items in category Building community of dimension A.

The QAI reached a reliability coefficient of .919 through Cronbach's alpha. It was also calculated the internal consistency coefficient of each of the six categories of the three dimensions, being significantly higher than the level in Orchestrating learning ( $\alpha = .811$ ), followed by Mobilising resources ( $\alpha = .757$ ), both of dimension C. Four categories were below the limit of acceptance 70: Organising support for diversity ( $\alpha = .665$ ), Building community ( $\alpha = .669$ ), and Developing a school for all ( $\alpha = .673$ ). Finally, dimension A values had the lowest coefficient ( $\alpha = .590$ ) indicating that the construct or concept measured in this dimension was not sufficiently present in the six items in the category. It should be acknowledged that in the validation of the instrument, researchers found variability for the dimensions of QAI that reflected the inclusion knowledge and experience of pre-service teacher students.

## Results

QAI provides descriptive data on university student attitudes. Means scores for each subscale are reported. Besides, Student t test compared means of student characteristics. It revealed significant differences in sex variable, confirming the effects in dimension A, specifically in items 1, 2, 3, 5 and 6 of category Building community and in items 8 and 11 of Establishing inclusive values ( $t = 4639$ ,  $p < .001$ ). Furthermore, it was found significant differences in Developing the school for all (items 14, 15, 16, 17, 18 and 19) and Organising support for diversity (items 20, 21, 22, 23, 24, 25, 27 and 28). Finally, there were significant differences in Orchestrating learning (items 29, 30, 31, 33, 34, 35, 36, 37 and 38) and Mobilising resources (items 41, 42, 43, 44 and 45). In response to the independent variable cultural experience significant differences were found in item 9 Establishing inclusive values ( $t = 2,448$ ,  $p < .014$ ), while in the independent variable disability experience, researchers revealed significant differences in item 10 of Establishing inclusive values ( $t = 3095$ ,  $p = .004$ ), items 16 and 18 of Developing the school for all, items 20, 23 and 27 of Organising support for diversity, and item 36 ( $t = 3.564$ ,  $p < .001$ ) of Orchestrating learning.

Other tests were conducted to evaluate differences among participants in the variables age, educational degrees, cycle of studies, intercultural experience and experience with special education needs. One-way analysis of variance compared means obtained in QAI category items (see Table 1). Subsequent ANOVAs were established based on the post hoc Tukey test, which revealed differences in Age: item 5 in category Building community; items 8 and 9 in category Establishing inclusive values; items 24 and 25 in category Organising support for diversity, and item 33 in category Orchestrating learning. The Degree variable caused differences in items 5, 6 and 7 of category Building Community; item 24 of category Organising support for diversity, and item 40 in category Orchestrating learning. Finally, the variable Cycle of studies caused differences in items 5 and 6 of category Building Community; item 20 of Organising support for diversity, and item 42 of Orchestrating learning. Overall, students had different inclusion perceptions by age, degree, cycle of studies, although the effect sizes were small.



**Table 1. Mean scores, standard deviations, p values (one-way ANOVA), Levene test and post hoc Tukey test for categories of items according CAII Age, Degree and Cycle of studies**

Categories and items	Levene	df	F	p	Post hoc Tukey	Means	σ
<b>AGE</b>							
<i>Building community</i>							
5. Existence of teacher - family collaboration.	.059	5	7.966	.000	Age 17-19 with 23-25	17-19=2.75	.888
					Age 17-19 with 26-28	20-22=2.94	.936
					Age 17-19 with 29-31	23-25=3.12	.884
					Age 17-19 with +32	26-28=3.21	.920
					Age 20-22 with 23-25	29-31=3.48	.849
					Age 20-22 with 26-28		
					Age 20-22 with 29-31		
<i>Establishing inclusive values</i>							
8. Have high expectations for all students.	.411	5	2.874	.014	Age 17-19 with 20-22	17-19=2.84	.934
					Age 17-19 with 23-25	20-22=3.18	1.495
						23-25=3.22	.835
9. The educational community must share a philosophy of inclusion.	.050	5	6.404	.000	Age 17-19 with 23-25	17-19=3.08	.822
					Age 17-19 with 26-28	23-25=3.41	.733
						26-28=3.44	.725
<i>Organising support for diversity</i>							
24. Support for students learning Spanish as a second language should be coordinated with other types of educational support.	.391	5	2.481	.030	Age 20-22 with 23-25	20-22=3.24	.724
						23-25=3.38	.844
25. Educational guidance policies and psychopedagogical intervention measures are linked to curriculum development and pedagogical support.	.993	5	3.149	.008	Age 20-22 with 23-25	20-22=3.27	.694
						23-25=3.50	.787
<i>Orchestrating learning</i>							
33. Learning strategies should be collaborative.	.005	5	2.502	.029	Age 20-22 with 23-25	20-22=3.44	.699
						23-25=3.57	1.111
<b>DEGREE</b>							
<i>Building community</i>							



Categories and items	Levene	df	F	p	Post hoc Tukey	Means	$\sigma$
5. Existence of teacher - family collaboration.	.005	3	11.668	.000	EChE with PE	ECHE=2.89	.899
					EChE with PG	PE=3.08	.948
					PE with PG	PG=3.25	.873
					PG with MTE	MTE= 2.98	.890
6. Teachers and School Board must work well together.	.747	3	4.869	.002	EChE with PG	ECHE=3.29	.702
					EChE with MTE	PG=3.45	.683
						MTE=3.44	.665
7. All institutions of the community should be involved in the center.	.462	3	2.970	.031	EChE with MTE	ECHE=3.20	.749
						MTE=3.36	.690
<i>Organising support for diversity</i>							
24. Support for students learning Spanish as a second language should be coordinated with other types of educational support.	.782	3	3.275	.020	EChE with MTE	ECHE=3.23	.750
						MTE=3.40	.689
<i>Orchestrating learning</i>							
40. Should you bet on the effective participation of all students in the complementary and extracurricular activities?	.697	3	5.461	.001	EChE with PE	ECHE=3.12	.818
					EChE with PG	PE=3.27	.787
						PG=3.31	.753
<b>CYCLE OF STUDIES</b>							
<i>Building community</i>							
5. Existence of teacher - family collaboration.	.112	3	6.111	.000	1° Cycle with PG	1° C=2.96	.943
					MTE with PG	MTE=2.97	.889
						PG=3.24	.872
6. Teachers and School Board must work well together.	.546	3	3.738	.011	1° Cycle with 2° Cycle	1° C=3.30	.699
						2° C=3.44	.664
<i>Organising support for diversity</i>							
20. Coordination of all forms of support.	.328	3	3.749	.011	1° Cycle with 2° Cycle	1° C=3.43	.714
					1° Cycle with PG	2° C=3.54	.609
						PG=3.56	8.94
<i>Orchestrating learning</i>							
42. Knowledge and optimal use of community resources are essential	.384	3	3.083	.026	1° Cycle with 2° Cycle	1° C=3.37	.739
							2° C=2.48



## Discussion

Attitudes of 1,667 students differed among themselves on items, categories and dimensions of QAI in five independent variables that helped the researchers to conjecture attitude changes. The survey supports the ideal of inclusion but inconsistencies in the findings also appear due to the reliability of some QAI subscales. In this sense, attitudinal methods and measures tend to reveal lower consistency than do attainment tests (Cook, Cameron and Tankersley, 2007).

Age was stratified into six subgroups, and students showed differences in all dimensions, mainly in Dimension A. Major attitudes discrepancies between 29 to 31 year-old students was found in "Collaborative faculty-family existence". Also, 23 to 25 year-old students, representing 39.2% of the sample differed from other subgroups in two items of Establishing inclusive values. Finally, 23 to 25 year-old students differed from 20 to 22 year-old students in Organising support for diversity. As Unianu (2012, p. 903) acknowledged, "teachers with more experience in the primary school are more convinced that they are capable to adapt the educational activity in order to take into consideration all children's needs".

There were significant differences among sex students. The highest differences were found in Organising support for diversity. Similarly, significant differences were found in six items of Developing the school for all. And so it was with the highest average among women in five items of Build community and in two items of Establishing inclusive values. Finally, nine items of Orchestrating learning and five items of Mobilising resources had the highest average in women. This result is one that has shown diverse effects in the literature (Specht et al., 2016). If we take into consideration the attitudes at the school level students, one might assume that girls in school first and then college students have more positive attitudes towards inclusion. According to De Boer, Pijl, Minnaert and Post (2014, p. 578), "the outcomes revealed an overall significant difference between boys and girls, indicating that boys hold significant more negative attitudes than girls".

Measuring the amount (number of years) of experience in multiculturalism although unknowing the nature of such experience (e.g. bilingual education, immigration, ethnic minority, the presence of a multicultural faculty at school, etc.), originated a significant difference in Establishing inclusive values between the two groups, with the highest average in students who had 4 to 10 years of experience. As Unianu (2012, p. 903) found, "teachers who work with children with different ethnical backgrounds are more opened to the idea of inclusion than those who don't work with such categories of children". The fact that the difference will be placed on an item which calls for extending the commitment to the philosophy of Building community helps to reflect on the desirability of intercultural contact, communication and social opportunities. However, researchers have weighed the low power of the independent variable to produce effect on the terms thus defined, although teaching practices to interact with students from different cultures cause effect "contradictions".

Research literature has endorsed that previous experience with special education students was associated with high levels of self-efficacy and positive attitudes. However, it has not been sufficiently weighed the differences among students by the size of the experience, and when it is done as in this study, it has not clarified its nature. However, attitudinal differences between the subjects of the two groups in several categories of items were noticed, mainly in three items of Organising support for diversity and in two items of Developing the school for all, and to a lesser degree, in item 9 of category Establishing inclusive values and item 36 of Orchestrating learning. This variety of differences in attitudes towards statements include changes in the experience because they are complicated (note that the averages were higher in six of the seven items on students who were between 0-3 years of experience), as it has been found in a study: "It seems that pre-service teachers' field experience with students with disabilities and their personal experiences with people with disabilities exert complex influences on their attitudes toward inclusion" (Kim, 2011, p. 367). This result direction seems consistent with a related finding. In this sense, Peebles and Mendaglio (2014, p. 1332) declared: "This study concluded that there was no interaction effect for prior experience and self-efficacy gains over time". As a final summary, we cite the following passage from Boyle, Topping and Jindal-Snape (2013, p. 529): "Interestingly, the findings of Villa et al. (1996) indicate that years of experience in the inclusion of children with additional support needs had no significant impact on the attitudes of teachers in the field of general education".

Four subgroups were considered in the degree variable. EchE students marked the most varied significant differences. So, when we compared them with PE students there was a difference in four items of three categories (Building community, Organising support for diversity and Orchestrating learning); and when compared EchE and PG they were significantly different on two items in Building community and Orchestrating learning. EchE students had lower positive attitudes than students in other degrees, particularly with MTE students, aligning this result with another Australian finding: "An interesting point of note was that participants enrolled in a postgraduate course for teacher education were significantly more positive in their attitudes towards inclusive education than participants enrolled in an undergraduate course" (Costello & Boyle, 2013, p. 139).

The course of study as an independent variable alluded to students in their first two years of college degrees (EchE and PE) as opposed to the rest of the student subgroups, who had more years of experience. Some previous studies have supported the incorporation of this variable, as Costello and Boyle (2013, p. 138) had stated: "Participants reported more



positive attitudes towards inclusion in their first year of university than in following years. This did not support the hypothesis that as pre-service secondary teachers' progress through their professional training, their attitudes towards inclusive education would improve". In the present work, undergraduates differed from the second cycle students in three items of Building community, Organising support for diversity and Mobilising resources, and curiously MTE with PG student practices in item 5 of Building community. The extension of the curricular offerings to students of the MTE does not seem to have marked differences in attitudes toward inclusion for the remaining students.

## Conclusion

From the findings of this study, there were significant differences in EChE, PE, PG and MTE students in attitudes towards inclusive education as measured by QAI, due to variables such as age, sex, intercultural experience, expertise in disability, and degree and course of study. In this context it is important to recognize the importance of measuring the attitudes of university students working in contexts of social integration. The tasks hinge around inclusive cultures, policies and practices. Special education training challenges a heterogeneous university student population where sex makes a major difference among students.

## Implications

This study has explored an adaptation of the "Index for Inclusion" (Booth and Ainscow, 2000) to develop and evaluate inclusive schools, and has provided a clear picture of the La Laguna context of pre-service teachers and educators. University students believe that teachers and families should collaborate in order to include children in regular classrooms, cooperate to change teaching strategies for all children in classrooms, and develop knowledge and skills for building a responsible inclusion community.

However, the study has some limitations regarding the university measure. QAI requires further investigation to solve the reliability of subscales. As the "Index for Inclusion", the QAI is neat in the statements and may cause difficulty in curriculum implementation at university level, but its ductility can cause significant impact on research on inclusiveness in the School of Education. All student teachers should be trained in QAI while schoolteachers should received in-service training to handle included children. Also, the ULL should put in place a compulsory inclusive university policy. The findings point to the need of an analysis of university support mechanisms at the forefront of teacher educators' training. There should be a specific budget for inclusive university attitude training so that the issue of Mobilising resources can be addressed. A broader university agenda must be advocated, in favor of a transformative university-wide approach and more flexible EChE, PE, PG and MTE programs responding to a diversity of student teachers in a rapidly changing society. Knowledge of the demographic differences found in the Faculty of Education can aid educators in adapting curriculum programs to suit the demographic requests of their corresponding students.

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## References

- [1] Aguado, T. (2004). Investigación en educación intercultural. *Educatio Siglo XXI*, 22(0), 39-58.
- [2] Ainscow, M. (2005). Developing inclusive education systems: what are the levers for change. *Journal of Educational Change*, 6(2), 109-124.
- [3] Ainscow, M., & Sandill, A. (2010). Developing inclusive education systems: the role of organisational cultures and leadership. *International Journal of Inclusive Education*, 14(4), 401-416.
- [4] Alegre, O.M., & Villar, L.M. (2011). Tres tipos de interacción (3TI) en el aprendizaje en línea de capacidades curriculares y didácticas (CCDs) del profesorado del sistema educativo de Islas Canarias. *Educación XXI*, 14(2), 19-42.
- [5] Alegre, O.M., y Villar, L.M. (2015). Inclusión e Interculturalidad. Un estudio en el marco de la enseñanza universitaria. *Revista nacional e internacional de educación inclusiva*, 8(3), 12-29.
- [6] Avramidis, E., & Norwich, B. (2002). Teachers' attitudes towards integration/inclusion: a review of the literature. *European Journal of Special Needs Education*, 17(2), 129-147.
- [7] Booth, T., & Ainscow, M. (2000). *Index for inclusion*. Bristol: Centre for Studies on Inclusive Education.
- [8] Booth, T., Ainscow, M., & Kingston, D. (2006). *Index para la Inclusión: Desarrollo del juego, el aprendizaje y la participación en Educación Infantil*. Bristol: CSIE. (Spanish translation and adaptation in 2007 by González-Gil, F., Gómez-Vela, M., & Jenaro, C.).



- [9] Boyle, Ch., Topping, K., & Jindal-Snape, D. (2013). Teachers' attitudes towards inclusion in high schools, *Teachers and Teaching: theory and practice*, 19(5), 527-542.
- [10] Cook, B.G., Cameron, D.L., & Tankersley, M. (2007). Inclusive teachers' attitudinal ratings of their students with disabilities. *The Journal of Special Education*, 40(2), 230-238.
- [11] Costello, S., & Boyle, C. (2013). Pre-service Secondary Teachers' Attitudes Towards Inclusive Education. *Australian Journal of Teacher Education*, 38(4), 129- 143.
- [12] Darretxe, L., Goikoetxea, J., & Fernández González, A. (2013). Análisis de prácticas inclusivas y excluseras en dos centros educativos del País Vasco. *Actualidades Investigativas en Educación*, 13(2), 105-134.
- [13] De Boer, A.A., Pijl, S.J., Minnaert, A.E.M.G., & Post, W.J. (2014). Evaluating the Effectiveness of an Intervention Program to Influence Attitudes of Students Towards Peers with Disabilities. *Journal of autism and developmental disorders*, 44(3), 572-583.
- [14] De Boer, A.A., Pijl, S.J., Post, W.J., & Minnaert, A.E.M.G. (2012). Which variables relate to the attitudes of teachers, parents and peers towards students with special educational needs in regular education? *Educational Studies*, 38(4), 433-448.
- [15] De Boer, A.A., Timmerman, M.E., Pijl, S.J., & Minnaert, A.E.M.G. (2012). The psychometric evaluation of a questionnaire to measure attitudes towards inclusive education. *European Journal Psychol. Educ.*, 27, 573-589.
- [16] De Vroey, A., Struyf, E., & Petry, K. (2016). Secondary schools included: a literature review. *International Journal of Inclusive Education*, 20(2), 109-135,
- [17] Durán, D., Echeita, G., Giné, C., Miquel, E., Ruiz, C., & Sandoval, M. (2005). Primeras experiencias de uso de la Guía para la evaluación y mejora de la educación inclusiva (Index for Inclusion) en el Estado español. *Revista Electrónica Iberoamericana sobre Calidad, Eficacia y. Cambio en Educación*, 3(1), 464-467.
- [18] Giangreco, M.F., Suter, J.C., & Hurley, S.M. (2011). Revisiting Personnel Utilization in Inclusion-Oriented Schools. *The Journal of Special Education*, 47(2) 121–132.
- [19] Idol, L. (2006). Toward Inclusion of Special Education Students in General Education: A Program Evaluation of Eight Schools. *Remedial and Special Education*, 27(2), 77-94.
- [20] Kim, J-R. (2011). Influence of teacher preparation programmes on pre service teachers' attitudes toward inclusion. *International Journal of Inclusive Education*, 15(3), 355-377.
- [21] Kugelmass, J.W. (2001). Collaboration and compromise in creating and sustaining an inclusive school. *International Journal of Inclusive Education*, 5(1), 47-65.
- [22] Lambe, J., & Bones, R. (2006). Student teachers' perceptions about inclusive classroom teaching in Northern Ireland prior to teaching practice experience. *European Journal of Special Needs Education*, 21(2), 167-186.
- [23] Mayrowetz, D., & Weinstein, C.S. (1999). Sources of Leadership for Inclusive Education: Creating Schools for All Children. *Educational Administration Quarterly*, 35(3), 423-449.
- [24] Mvududu, N.H., & Sink, CH.A. (2013). Factor Analysis in Counseling Research and Practice. *Counseling Outcome Research and Evaluation*, 4(2), 75-98.
- [25] O'Rourke, J., & Houghton, S. (2008). Perceptions of Secondary School Students with Mild Disabilities to the Academic and Social Support Mechanisms Implemented in Regular Classrooms. *International Journal of Disability, Development and Education*, 55(3), 227-237.
- [26] Peebles, J.L., & Mendaglio, S. (2014). The impact of direct experience on pre service teachers' self-efficacy for teaching in inclusive classrooms. *International Journal of Inclusive Education*, 18(12), 1321-1336.
- [27] Poon-Mc. Brayer, K.F., & Wong, P.M. (2013). Inclusive education services for children and youth with disabilities: Values, roles and challenges of school leaders. *Children and Youth Services Review*, 35(9), 1520-1525.
- [28] Rajovic, V., & Jovanovic, O. (2013). The Barriers to Inclusive Education: Mapping 10 years of Servian Teacher's Attitudes Toward Inclusive Education. *Psychological and Pedagogical Survey*, 14(3-4), 78-97.



- [29] Rosselló, M.R. (2010). El reto de planificar para la diversidad en una escuela inclusiva. *Revista Iberoamericana de Educación*, 51(4),1-10.
- [30] Sandoval, M., López, M.L., Miquel, E., Durán, D., Giné, C., & Echeita, G. (2002). Index for Inclusion. Una guía para la evaluación y mejora de la educación inclusiva. *Contextos Educativos*, 5, 227-238.
- [31] Santhanam, E., & Hicks, O. (2004). Student perceptions of inclusion in unit/course evaluations. *International Journal of Inclusive Education*, 8(1), 91-102.
- [32] Sentenac, M., Ehlinger, V., Michelsen, S.I., Marcelli, M., Dickinson, H.O., & Arnaud, C. (2013). Determinants of inclusive education of 8–12 year-old children with cerebral palsy in 9 European regions. *Research in Developmental Disabilities*, 34(1), 588-595.
- [33] Specht, J., McGhie-Richmond, D., Loreman, T., Mirenda, P., Bennett, S., Gallagher, T., ... Cloutier, S. (2016) Teaching in inclusive classrooms: efficacy and beliefs of Canadian pre service teachers. *International Journal of Inclusive Education*, 20(1), 1-15.
- [34] Swain, K.D., Nordness, P.D., & Leader-Janssen, E.M. (2012). Changes in Pre service Teacher Attitudes Toward Inclusion. *Preventing School Failure: Alternative Education for Children and Youth*, 56(2), 75-81.
- [35] Symeonidou, S., & Phtiaka, H. (2009). Using teachers' prior knowledge, attitudes and beliefs to develop in-service teacher education courses for inclusion. *Teaching and Teacher Education*, 25, 543-550.
- [36] UNESCO (1994). *The Salamanca Statement and Framework for Action on Special Needs Education*. Paris: UNESCO/Ministry of Education, Spain. (ED-34/WS/18.)
- [37] UNESCO (2009). *Policy Guidelines on Inclusion in Education*. Paris: UNESCO.
- [38] Unianu, E.M. (2012). Teachers' attitudes towards inclusive education. *Procedia-Social and Behavioral Sciences*, 33, 900-904.
- [39] Vlachou, A., Didaskalou E., & Voudouri F. (2009). Adaptaciones en la enseñanza de los maestros de Educación General: repercusiones de las respuestas de inclusión. *Revista de Educación*, 349, 179-201.
- [40] Wedell, K. (2005). Dilemmas in the quest for inclusion. *British Journal of Special Education*, 32(1), 3-11.
- [41] Wedell, K. (2008). Confusion about inclusion: patching up or system change? *British Journal of Special Education*, 35(3), 127-135.
- [42] Wehmeyer, M. (2009). Auto determinación y la Tercera Generación de prácticas educativas de inclusión. *Revista de Educación*, 349, 45-67.

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