



Building bridges in special education: Development of an instrument to evaluate the collaboration between regular and special education teachers

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Suggested Citation:

Dias, P., C. & Pérez, J., D. (2013). Building bridges in special education: Development of an instrument to evaluate the collaboration between regular and special education teachers. *International Journal of Learning and Teaching*, 5(2), 44-49

Received 28 January, 2013; revised 17 March, 2013; accepted 27 June, 2013.

Selection and peer review under responsibility of Prof. Dr. Hafize Keser, Ankara University, Turkey

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Abstract

Collaboration between teachers of Regular Education and Special Education is a prerequisite for the implementation of an inclusive school. However, research and training in this area is scarce. In order to obtain reliable figures of reality, this study aims to present a measure that would allow assessing, from the perspective of teachers of regular education, the type and efficiency of collaboration of teachers of special education. Using the literature review, we tested a version with 244 Portuguese kindergarten teachers and teachers of regular and special education. The data allowed us to find an instrument with 21 items that accounts for 59.84% of the variance of the responses into two subscales: Functions of the special education teacher (alpha of .941, 12 items) and impact of the special education teacher (alpha .890, 9 items), with full alpha .861. These dimensions were not affected by gender or age, but there were some differences depending on the academic degree, with experience with children with special needs. The instrument, short and with closed answers revealed potential that should be explored in further studies on this important dimension of educational inclusion. Some suggestions are presented.

Keywords: inclusion, teachers' collaboration, teachers' practices, instrument

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1. Introduction

Collaboration between various educational agents is a central aspect in the effectiveness of the teaching in general, and the promotion of learning of children with special educational needs (SEN), particularly. Given the challenges that inclusive education puts to the reality of schools and teaching practice, only the exchange of experiences and resources in a spirit of true collaboration, allows optimization of the answers.

In fact, the changes that inclusive education implies are so broad that adaptation is not possible in one night. And while we agree with its application in the conceptual and theoretical level, its implementation on the ground is not always straightforward. This implies that each faces the prejudices, schemes and expectations deeply rooted in the culture, but also to master the information, tools and resources for which many are unprepared. This is the starting point for reflection we propose aware of the challenges but also the difficulties of some teachers to share their practice, to admit and expose their difficulties and implement collaborative strategies to meet the needs of students and families. In this sense, this study aims to explore, based on a quantitative methodology, perceptions of teachers and educators on collaboration between teachers in regular and special education. Given the importance of this relationship, it is assumed as a key to further understanding about collaboration, supported by valid and reliable instruments. To do this, the psychometric properties of an instrument fitted are presented with a sample of teachers who evaluated the perceptions of educators and regular education teachers and make inferential analyses that allow us to better explore the factors associated with established collaboration.

2. Literature Review

The inclusion of people with disabilities in general education has become a role model in Western countries since the 80s (Heiman, 2004). While in Portugal this experience is more recent, it has generated reflection and research to find effective solutions to the inclusion of everyone in the school.

In fact, there have been many studies for inclusion to be successful. It is believed that several factors are important to its success (Waligore, 2002). First, teachers must accept their responsibility in the learning process of students with disabilities, according to the characteristics and needs of each student, and feel ready and available to work on a new paradigm of education (Waligore, 2002). They are responsible for the identification and monitoring of students, but also in improving the environments in which they develop (Correia, 2003). Second, parents need to be informed about the aims and objectives of the program to support their children in the sense of being actors involved in the process. Third, the inclusion requires a shared knowledge - active cooperation - of special education teachers and regular education to work toward a common goal.

Therefore, only the collaboration between all allowed responding effectively to the problems faced, thus promoting the creation of feelings of belonging and participation incentives and motivation (Correia, 2003, 2005). Collaboration should be a voluntary practice, based on equality of respect, trust and mutual respect and requires common goals, resources and responsibilities to promote quality of educational processes (ex.: Ainscow, 1997; Correia, 2003; Morgado, 2003).

This is necessary if we consider the different tasks of teachers, particularly in consultation with colleagues, other technicians, parents and other education professionals, in the joint implementation of lesson plans, in the preparation and review of individual education plans, working with students with SEN and their peers, etc. (Correia, 2008). Therefore, the greater the diversity of tasks and challenges the teacher faces, the greater the need for collaboration as a primary condition of the effectiveness of responses in special education (Madureira & Leite, 2003). This is even more important in a context in which the lack of initial training on inclusive education predominates (Costa, 1996).

In this context, the special education teacher in the school must provide a much more direct than indirect support to respond effectively to the needs of students with SEN (Correia, 2005). Her/his mission is to work directly with the student, propose additional support but also collaborate with the classroom teacher, and working with parents, teachers and students with SEN (Correia, 2005). The special education teacher is defined as "an intermediary between families, students and professionals, and will be her/his responsibility the knowledge of the various parts in the inclusion" (González, 2003, p. 68), both essential to optimise the process of learning as the socialisation of all students (Madureira & Leite, 2003).

Occasionally, there are good relations at the level of collaboration between regular education and special education teachers, but sometimes conflicting relationships between them can occur (Morgado, 2003). The recommended approach is to create a climate in which the two teachers, regular and special, can combine their skills and experience to create a classroom conducive to teaching and learning (Baumgart, Doyle, & Giangreco, 1995). This relationship is so important for the success of inclusive practices that Ben-Yehuda et al (2010) identify it as one of the major determinants of teachers' attitudes to inclusion.

3. Methodology

3.1. Sample

The sample consisted of 244 teachers of 1st cycle of basic education and Kindergartens for schools in the north of the country. Of this group, 80.3% (N = 196) were women and 19.7% of subjects (N = 48) were male, aged between 24 and 58 years old (M = 43.03, SD = 8.241). Most teachers have a bachelor's degree (67.2%, N = 164), 14.3% (N = 35) have a specialisation, 12.7% (N = 31) have a bachelor degree, and 5.7% (N = 14) of respondents holds a master degree. Years of service vary between 0 and 34 (M = 17.77, SD = 9,361), and 79.1% (N = 193) had experience with students with SEN, although 85.7% (N = 209) are regular education teachers while 14.3% (N = 35) are special education.

3.2. Instruments

For data collection a demographic questionnaire and a scale to assess the perception of collaboration and efficiency was used. The demographic questionnaire was developed by the authors of the study to gather personal and professional information, such as age, gender, educational level, years of service, experience with SEN students, teaching experience, etc.

To evaluate the collaboration between teachers of Special Education and Regular Education an scale was used based on the work of Costa (2006), with 48 items and four alternative answers from "strongly agree" to "strongly disagree". Once the psychometric properties of the original study and the population to which the instrument is addressed is different, we proceeded to adapt the items (without reference to teachers of support and focusing on Special Education) and were tested their psychometric properties.

3.3. Procedures

For the study, the authors of the instruments and the directors of the group of schools were contacted for permission to apply the questionnaires to teachers and educators. The protocol was applied to an intentional sample, not probabilistic method, and geographical proximity. Once collected, the data were coded and analysed in the statistical treatment program Statistical Package for Social Sciences (SPSS), version 18. Firstly the data was submitted to several Exploratory Factor Analysis until achieve an empirically and theoretically valid version of the measure and with good reliability (according to Cronbach Alpha). In a second moment, several inferential studies allow us to explore collaboration perceptions according to personal and professional variables.

4. Results

4.1. Development of the measure

With regard to validity and reliability, the 48 items were subjected to Bartlett and Kaiser-Meyer-Olkin's test of sphericity giving, respectively, the values of 4365.829 ($p < .001$) and 0.88, which allows us to understand their suitability for factor analysis. Then they were subjected to various principal components factor analysis with *varimax* rotation in order to find a theoretically and empirically sustainable structure for the data. A solution was found with two distinct factors with interpretable evidence that explains 59.84% of the variance. The first factor, with 8.174 eigenvalue explained 37.156% of the variance in the results and meets a set of thirteen items that refer to the functions of the special education teacher in an inclusive setting. A second factor, with 4.991 eigenvalue explaining 22.686% of the variance, found in nine items that seems to indicate the positive impact of collaboration. The fact that we find saturation values greater than 0.4 in all items, allows us to perceive a good discriminating power of these factors considered in. Cronbach's alpha was used for the calculation of internal consistency of the 21 items. Results allow us to find a total alpha value of .861, from .941 in the 12 items of the first factor (Functions of special education teacher) and .890 in the 9 items of the second factor (Impact of special education teacher).

Table 1. Exploratory factorial analysis

	Component	
	1	2
Special Education teacher helps to signalling students with SEN	.880	-.113
Special Education teacher helps overcome the difficulties of students with SEN	.862	-.105
Special Education teacher fosters self-esteem of students with SEN	.861	-.133
Special Education teacher accompanies students on field trips	.853	-.146
Special Education teacher contributes so the rights of students with SEN are respected like any other student at school	.830	-.199
Special Education teacher participates in parties held in school	.784	
Special Education teacher works together with family	.775	
Special Education teacher contributes so pupils with SEN are respected by their peers	.759	-.270
The regular education teacher discusses with the regular education teacher the matters that are worked in the classroom	.746	
Special Education teacher is an important element in the definition of strategies for assessing students with SEN	.736	
Special Education teacher programmes with the regular education teacher with equal responsibilities	.708	
Special Education teacher elaborates worksheets with the Special Education teacher	.521	.234
The presence of the Special Education teacher in the classroom, allows the development of appropriate strategies to all students	-.190	.830
The group benefits from the presence of a Special Education teacher in the classroom		.819
Special Education Teacher is a facilitator of the implementation of appropriate strategies to all students in the school	-.172	.769
The work within the classroom, it is more profitable whenever there is a Special Education teacher to give help to the regular education teacher		.749
Special Education Teacher helps all students in the class	-.224	.729
Special Education Teacher is more a help that the regular education teacher have and that will helper/him work with all children	-.119	.679
Special Education teacher working within the classroom is a good contribution to the class in general		.671
The students' performance improves when the Special Education teacher works in partnership with the regular education teacher	.273	.650
The work of the Special Education teacher is beneficial if developed within the classroom	.229	.639
Eigenvalue	8.174	4.991
% of the Variance	37.156	22.686
Cronbach Alpha	.941	.890

4.2. Inferential studies

A series of analyses allow us to verify that the perception of collaboration and impact do not differ by gender, age or years of service ($p > .05$). However, if we consider only the special education teaching experience, a weak, negative and significant relationship is found between the number of years in-service and the impact of the collaboration ($r = -.163$, $p = .011$) and a positive relationships with the effectiveness of collaboration ($r = .195$, $p = .002$). Depending on the level of education the results helped to realize the significant differences in the level of collaboration, being higher among teachers with master's ($M = 41.628$, $SD = 3.896$) and specialisation ($M = 40.642$, $SD = 5.486$). The Gabriel use of multiple comparison test allowed perceive that significant differences occur between groups of teachers with specialisation in Special Education and Bachelor's degree ($MD = 4.007$, $p < .01$). Also from professional experience, we found only differences in the scale of positive impact, with higher scores on the teachers who never worked with students with SEN ($M = 25.000$, $DP = 4.294$) that those who have had this experience ($M = 22.342$, $SD = 5.779$), with statistically significant differences [$t(103.151) = -3.635$, $p < .01$]. Teachers working in special education have a higher score on collaboration ($M = 40.600$, $SD = 4.942$), with statistically significant difference [$t(242) = -3.342$, $p = .001$], while regular education teachers have a higher score on the impact ($M = 23.479$, $SD = 4.913$), with statistically significant differences [$t(38.554) = 2.949$, $p = .005$].

5. Discussion and conclusion

This eminently exploratory work aims to contribute to the study of collaboration between regular and special education teachers. The data will allow us to find a valid and reliable instrument that seems to suggest, in general, a perceived lack of resources and training to meet the challenges of inclusive education, although most teachers seem to have the support and collaboration of special education teachers (Ali, Mustapha & Jelas, 2006; Waligore, 2002). It appears as an important factor in the perception of collaboration and efficiency, the role of experience in the education of children with SEN. In fact, there seems to be a socially correct conception about inclusion and teaching collaboration but this appears with different characteristics when it is actually lived by teachers, either by the work in special education or experience with SEN children. For this reason it reinforces the need for collaborative responses in special education, understanding the difficulties as challenges for the entire educational community and not a single exclusive concern of special education experts. Only by establishing links between specialist teachers in this field and regular education teachers can contribute to real change in practice and dissemination of inclusive culture in schools (Correia 2003, 2005). Despite the contributions should be considered the need to repeat this research with teachers in other locations, particularly urban areas, to analyse possible differences in the perception of the evaluated variables. Moreover, it underlines the need to confirm the psychometric properties of the instrument, as it is an adaptation of an earlier instrument and therefore, few are the empirical evidence of its features. Future studies should include other variables that allow us to create more comprehensive models to better understand this reality and act to implement true collaboration models in inclusive education.

Acknowledgements

Study developed under the PESt-OE/FIL/UI0683/2011, strategical program of the CEFH funded by Foundation for Science and Technology, Portugal.

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