

Perceived barriers and needs of teachers in inclusive schools and their relationship with transformation processes

Cecilia Latorre-Coscolluela^{a*}, Pilar Rivera-Torres^b, and Marta Liesa-Orús^c

^a *Department of Educational Sciences, Faculty of Human Sciences and Education, University of Zaragoza, Valentín Carderera, 4, 22003 Huesca, Spain, (+0034)659793756, clatorre@unizar.es
ORCID: <http://orcid.org/0000-0002-6083-8759>; LinkedIn: <https://es.linkedin.com/in/cecilia-latorre-coscolluela-84274110b>*

^b *Department of Marketing Management and Market Research, Faculty of Economics and Business, University of Zaragoza, Gran Vía, 2, 50005 Zaragoza, Spain, (+0034)606615542, privera@unizar.es
ORCID: <https://orcid.org/0000-0001-9319-5895>*

^c *Department of Educational Sciences, Faculty of Human Sciences and Education, University of Zaragoza, Valentín Carderera, 4, 22003 Huesca, Spain, (+0034)655920455, martali@unizar.es
ORCID: <http://orcid.org/0000-0002-9685-8399>*

** Corresponding author. Department of Educational Sciences, Faculty of Human Sciences and Education, University of Zaragoza, Valentín Carderera, 4, 22003 Huesca, Spain*

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In the transformation towards inclusive education, teachers are professionals who research, reflect on, and identify the conditions that hinder their development and that of their students. This study focused on a population of pupils with autism spectrum disorder (ASD). It aimed to apply a quantitative methodology to analyze the relationships existing among the barriers perceived in the teaching-learning process, teacher needs, and transformative attitudes toward the process of inclusion of these children. A total of 454 teachers from mainstream schools participated in this study. A Structural Equation Model was carried out to test the proposed relationships. The results showed that a greater perception of the barriers faced by these students meant that the needs perceived by teachers were also more pronounced. These needs are related to training and experience regarding the inclusion of pupils with ASD, as well as the resources and support teachers available to them. Perceived needs have significant positive effects on teachers' attitudes in favor of transforming the process of inclusion of pupils with ASD. The importance of introducing changes in inclusive education for the most vulnerable students was highlighted.

Keywords: transformation; barriers; needs; attitudes; ASD; Structural Equation Modeling

1. Introduction

Rethinking a school that works towards the inclusion of all its pupils implies a transcendental renovation rooted in the way the institution and the multiple varied processes that emerge there are understood. This transformation is born of permanent and critical reflection by teachers regarding their professional work, teaching practices, and the conditions under which they are conducted (Sánchez Casalla 2018). It must be remembered that the inclusion movement was primarily aimed at guaranteeing the right to quality education for all (Convention on the Rights of People with Disabilities 2007; Passiatore et al. 2017) because until relatively recently, many people were still denied this right. One of the theoretical precedents supporting the concept

of inclusion is the social model of disability. From this perspective, which originated in the 1970s, emphasis was placed on social barriers as the cause of disability (not as much on people's limitations) (Oliver 2013). Likewise, the need for real and effective participation of people with disabilities in public policies related to disability issues and their decision-making was emphasized.

In view of the evolution of reality, some progress has been made in achieving genuine quality education, as evidenced by the steps to introduce partial changes that, while benefiting a few, neglect many others. In fact, despite the statistics of recent years (Ministry of Education and Professional Training 2021) that indicate a low number of pupils attending special schools (0.48% of the total number of students), the Spanish education system continues to embrace the long task of generating stronger and more intense movements of a more inclusive nature, with the common aim of progressively developing more equitable and fairer systems of education.

Broadly speaking, the diverse concerns reported by teachers at inclusive schools include the lack of capacity to meet the demands of inclusion, negative attitudes of school staff members, feelings of rejection by pupils towards their peers with specific needs (Bhatnagar and Das 2013), the lack of funding available for adequate instructional materials and school staff, and the absence of collaborative networks among teachers (Lautenbach and Heyder 2019). In addition to these factors, in the last two decades, some research (Forlin and Chambers 2011; Sharma, Moore, and Sonawane 2009; Woodcock and Woolfson 2019) has pointed out other concerns claimed by teachers, such as the large number of pupils present in classrooms, the difficulties in satisfying the educational needs of children who require educational support other than that which is considered mainstream, the complexity of making educational adaptations, the excessive workload, effort, and additional responsibility to be assumed in the teaching process,

the lack of support from the authorities, and the scant training received on the subject of attending to different needs.

In addition to paying attention to the set of elements outlined thus far, the philosophy of inclusion requires the detection and removal of barriers that prevent the effective exercise of rights associated with high-quality inclusive education. The concept of “barriers to learning and participation,” developed by Booth and Ainscow in 2000, refers to the most appropriate way for teachers to approach their work regarding clearly disadvantaged pupils (Booth and Ainscow 2000). Specifically, these authors (Ainscow, Booth, and Dyson 2006) define barriers to inclusion as elements that limit progress toward school for all. As highlighted by authors such as Arnaiz, de Haro, and Maldonado (2019), these elements are not understood as individual issues but rather result from the interaction of the personal characteristics of the students with those of the school and the social context in which they find themselves.

Children with autism spectrum disorder (ASD) are among the most vulnerable students. Therefore, acquiring full awareness of what impediments obstruct the participation, learning, and harmonious coexistence of certain children in school is, as noted by López Melero (2011, p.42), “the ethical commitment of the discourse of the new culture of inclusive education.” Furthermore, all of these ideas remain aligned with Sustainable Development Goal 4, which is committed to inclusive and high-quality education for all children (United Nations 2015).

In 2008, the *48th session of the International Conference on Education* was held in Geneva, the theme of which was “Inclusive Education: The Way of the Future.” After it was held, attention was drawn to the strategic role played by universities in the initial and continuous training of school teaching staff in inclusive education and the promotion of research in this field. In referring to such teacher training, reference should first be made to the initial training

received in higher education institutions, where an attempt is made to raise students' awareness of their responsibilities as future teachers (Espino-Díaz and Fernández-Caminero 2018).

Research carried out over the last decade (Cochran-Smith et al. 2015; Ko and Boswell 2013) has shown that teachers consider that the instruction they receive during their initial training is not sufficiently comprehensive to enable them to respond successfully to the diversity found in mainstream schools. In line with McCrimmon's (2015) comments, this could be because of the limited emphasis placed by higher education training programs on offering the most appropriate educational responses to each pupil in theoretically inclusive classrooms.

It should also be noted that there is a need for the continuous development of education professionals, known as "ongoing refresher teacher training." This type of training aims to provide teachers with knowledge that is gradually emerging in society so that they can transmit it within the classroom. As some authors have pointed out (Rosmalily and Woollard 2019; Yada and Savolainen 2017), this training should be oriented towards cooperation, collaboration, dialogue, reflection, knowledge, group work, effort, and motivation. All of these are focused on achieving quality education in which a heterogeneous student population offers an adequate educational response.

Teachers' experiences have also been established as a relevant variable leading to the manifestation of differentiated perceptions. However, it should be noted that this research did not yield results that follow a single uniform line. In certain studies, such as Chiner and Cardona (2013), teachers' experience has been seen to have no significant effect on the change in perspective towards inclusion, while in other works (Gal, Schreur, and Engel-Yeger 2010), actual educational practice that has been experienced did influence these perceptions. Other studies (Kurniawati et al. 2017) have shown the effects of teachers' experiences on the presence

of more favorable attitudes towards inclusion. According to this study, those who had worked in schools with integration units displayed considerably more positive attitudes than those who had little or no experience with these practices.

The transformation of teaching practices and, in general, of a school towards the construction of inclusive learning communities in which diversity is truly implemented requires the fully active involvement of its primary stakeholders. Among these stakeholders, teachers are promoters of pedagogical renovation that must lead a shift towards the reality of widely known expressions such as “significant learning,” “pupil-centered learning,” or “learning to learn” (Ibrahim-Josepg and Lavia 2019; Ohito and Oyler 2017). Aspiring to become a just and democratic society implies the need to train professionals as agents of change and intellectuals who work and contribute to improving schools (García Gómez 2019; McKay 2016). Promoting this transformation from a practical viewpoint is, as some authors suggest (Garnier 2022; Pantic and Florian 2015), the most feasible path to strengthening an educational setting in which equity, respect, and dynamism permeate the learning and participation of any child. It is only when teachers assume that the training they have been receiving until now is insufficient and incorporate into their mindsets the unconditional acceptance of the different rhythms and interests of learning that they come face-to-face with the most truthful reality of the inclusive education system. Within this recognition, other people are accepted regardless of their personal and social circumstances in a context where diversity is respected (Sánchez Casalla 2018).

In both the national (Spain) and international panorama, several studies (Mónico et al. 2020; Woodcock and Woolfson 2019) have independently analyzed the barriers and needs perceived by teachers in their daily professional practice within a mainstream schooling environment. However, no studies have explored the relationships between these variables.

Moreover, it must be borne in mind that a constant and critical awareness of the reality that surrounds these teachers and their knowledge of the problems and circumstances of their settings will offer them the possibility, as mentioned by García Gómez (2019), of transforming that reality, and in turn, transforming themselves.

Therefore, this study aimed to examine teachers' perceptions in mainstream schools regarding the obstacles hindering their professional performance with pupils with ASD. In addition, the needs of these education professionals are analyzed to see whether they are, in some way, determined by the perception of the barriers mentioned above within the process of educating these pupils. Finally, the study also examines the consequences that the manifestation of teaching needs has on transformative and critical attitudes toward applying the process of inclusive teaching-learning in children with ASD. This study focused on the implications of this set of variables on students with ASD because, from an international perspective (Cassady 2011; Karal and Riccomini 2016), it has been shown that teachers' perceptions of educational inclusion are somewhat less positive when they have the responsibility to include students with special needs in their classrooms. This is mainly due to the complexity of including students with ASD. The ambivalence between teacher opinion and action seems to maintain a close link with factors that can reduce teachers' desire to include students with special needs in their classrooms.

Thus, la Figure 1 shows the relationships between the variables tested in this study. The figure proposes that the perceived barriers to the learning of students with ASD influence the needs of teachers. In turn, it is expected that these teaching needs have a direct relationship with the attitudes in favor of introducing significant transformations in the regular educational systems that serve students with ASD.

(Insert Figure 1 here)

2. Methodology and method

To achieve the goal of this research and study the relationships between the different constructs proposed, it was necessary to associate the different types of variables that made up the questionnaire. Namely, these are the perceived barriers in the teaching-learning process implemented with pupils with ASD, teacher needs, and transformative attitudes towards the process of inclusion of these children. A quantitative research methodology was employed using the questionnaire as a data collection instrument. The relationships between variables were analyzed using Structural Equation Models with Latent Variables (SEM-VL). This type of analysis makes it possible to test and estimate relationships and effects based on a combination of statistical data and causal assumptions. Following these premises, two models were proposed: a measurement model and a structural model. These models were tested by applying confirmatory factor analysis (in the first phase) and estimating the relationship between the latent variables in the study (in the second phase). The study data were obtained using a questionnaire that included socio-demographic items about the teachers who answered the questionnaire and multiple indicators for each construct. The participating teachers belonged to the Autonomous Community of Aragón (Spain) and may or may not have had educational experience with children with ASD.

2.1. Sample

The study sample included teachers from mainstream schools in the Autonomous Community of Aragón (Spain). Altogether, 84 selected the male sex option (18.5%), and 370 selected the female sex option (81.5%). This difference between men and women is a faithful reflection of what happens in reality regarding the distribution of sexes in the teaching profession. After they

were informed of the objectives of the research through the school administration, they were sent a link that allowed them access to the questionnaire. Subsequently, the schools were contacted via telephone as a reminder. Finally, a total of 454 valid responses were obtained (approximately 12% of the total teachers working in the Autonomous Community of Aragón). Table 1 shows the respondents' socio-demographic characteristics.

A large percentage worked in public schools (84.4%), while others were employed in state-subsidized or private schools (15.6%). In terms of age, 11% of the teachers were between 22 and 30 years old, while the percentages of participants in the other two age groups were similar (45.1% aged 31–45 years and 43.9% aged 46–65 years). More than half of the teachers (58.5%) had a short-cycle qualification, and 31.1% had a bachelor's or other undergraduate degree. Only 10.4% had completed postgraduate or doctoral studies. The distribution of the sample by professional role performed at the school was as follows: 48.7% taught General Education, 29.7% worked in Special Education or Infant and Primary Education Guidance Teams, and 21.6% were part of school Governing Boards. Regarding experience in the education of pupils with ASD, 27.3% stated that they had not previously worked with such children. In comparison, the remaining 72.7% had between one and ten years of experience with them.

(Insert Table 1 here)

2.2. Defining variables and instrument

A questionnaire was designed to collect the data for this study. Once the available literature on the variables under study was reviewed in depth, the next step was to define each of the latent constructs, whose relationships were analyzed later. To guarantee the validity of the questionnaire content, we considered the contributions of ten experts on the subject. Five were university teachers in the Department of Educational Sciences and Psychology, and the other five

were teachers in Infant and Primary Education schools. After this process, we modified the questionnaire (reduced the number of items and changed the wording of some statements). The final version of the instrument consisted of two clearly differentiated sections, the first of which required participants to provide information on their socio-demographic characteristics. The second part included the indicators defining the latent constructs to be analyzed:

- 1) The perceived barriers at the didactic level for pupils with ASD (3 items).
- 2) The reported needs in terms of training and resources (7 items).
- 3) The transformative attitudes towards the process of inclusion of these children (5 items).

Each item is measured on a Likert-type rating scale with 11 possible answers. This figure was used as a reference because it was similar to the grading scheme used by teachers in the Spanish education system. On that scale, 10 indicated “strongly agree: with the item, while 0 meant “strongly disagree.” In the second part, participants answered 15 items.

The barriers perceived (BATL) by teachers within the teaching-learning processes is the first latent construct. Barriers to learning and participation occur when pupils’ personal or cultural conditions entail their learning style to which the usual curriculum is unable to provide an adequate response (Booth and Ainscow 2000). Within this notion, the barriers detected within the teaching-learning process (also known as didactic barriers) are related to the impediments detected concerning classroom practices and dynamics that occur when different needs do not respond optimally (Echeita 2006; López Melero 2011).

Second, the construct of teaching needs (NE) is defined as the demands of teachers related to the teaching-learning processes that they carry out in schools (Pérez Serrano 1999). These needs fundamentally refer to a theory and practice that leads to the development of successful and effective integration in classrooms (Majoko 2018). According to the literature,

these requirements can take two forms: on the one hand, the need for training and experience with pupils with different needs (NET) in inclusive settings, and on the other hand, the need for resources, personal and material support and aids, and the availability of time for collaborative work (NER). This section included indicators related to teacher training to advise families and carry out specific educational practices with students with ASD, more specialized support in the classroom, and more resources to guide student learning needs.

The third latent variable referred to transformative and critical attitudes towards the inclusion of pupils with ASD (ATT_CH). This fundamentally refers to the voluntary positioning of teachers towards reflection and recognition of the educational space that, in this specific case, surrounds pupils with needs derived from ASD and the introduction of changes in their practices. Specifically, indicators relate to the need to involve the educational community in the promotion of inclusive education, the creation of open projects that include everyone's needs, and the transformation of the educational curriculum to make it common to all.

2.3. Data analysis procedure

To test the relationships between the variables posited in the objectives, the method adopted in this study took the form of Structural Equation Modeling with Latent Variables (SEM-LV). This approach makes it possible to jointly analyze the direct, indirect, and total effects of all variables that make up the hypothesized model. Estimates of the relationships between variables were performed using the software package MPLUS version 7.4 (Muthén and Muthén 1998, 2007) with the robust maximum likelihood procedure.

In the first phase, a model for measuring the latent constructs was proposed. This stage, also called confirmatory factor analysis, reflects the relationships established between the latent variables (constructs or factors) and observed indicators (or observed variables). Thus, the

factorial loadings and coefficients of the explained variance of each of the study's constructs were evaluated: the AVE coefficient of Fornel and Larcker (1981) and McDonald's (1985) omega coefficient (CRC). At this point, it should be mentioned that minimum values of .70 and .50 are recommended for the CRC and the AVE, respectively. To assess the existence of a higher-order dimension in teachers' perceived needs, and considering the high correlations between the dimensions, a second-order model was estimated (Bagozzi 2010).

In the second phase, the structural model was tested by estimating the relationship between the latent variables. The barriers that teachers perceive in the teaching-learning process implemented by students with ASD are, therefore, expected to have a significant influence on the needs that these professionals express when offering an inclusive educational response to these children. Finally, the attitudes in favor of the need to introduce transformations in the mainstream systems of education in which pupils with ASD are enrolled are also expected to be significantly explained by the needs perceived by teachers in the work setting to be able to work with them.

3. Results

Table 2 shows the mean scores and standard deviations of each of the indicators of perceived barriers, teaching needs, and attitudes towards the transformation of the process of inclusion of pupils with ASD. The total mean of the indicators of barriers in the teaching-learning process applied to these students was above 5 ($M = 7.69$). Considering these data, in general, it can be seen how this group of teachers from mainstream education schools perceived some notable obstacles in the educational attention delivered to pupils with ASD. Within the teaching-learning process applied to these children, the barrier that was found to be less pronounced was excessive individualization in the work of teachers ($M = 7.34$). Conversely, structuring the curriculum into

disciplines and textbooks hindered the learning of students with ASD, with the highest score reported by this sample of teachers ($M = 8.10$). Competitive organization of classroom activities had an intermediate score. However, the mean score for this item was outstanding ($M = 7.63$).

With respect to the mean score of perceived needs (NE), the data analysis yielded an average of 9.12, which again highlights the existence of pronounced teaching needs at both the training and experience levels (Mean NET = 9.09) and in terms of resources, support, and collaboration (Mean NER = 9.14). Regarding transformative attitudes towards the inclusion process (ATT), Table 2 shows high scores for all indicators of the dimension. The most outstanding scores refer to the need to involve all members of the educational community in the promotion of inclusive education ($M = 9.37$) and to consider the support offered to children with ASD as a right ($M = 9.35$). These results could be translated as a visible predisposition of teachers towards processes of educational change and transformation towards more inclusive contexts.

(Insert Table 2 here)

The measurement model was operationalized and estimated to study the degree of adequacy of the dimensional structures of the constructs whose relationships were to be analyzed in this study. After analyzing the data, the goodness of fit statistics and indices of the model did not allow this measurement model to be rejected (RMSEA = .04, SRMR = .05, CFI = .97, χ^2 [85] = 132.29 (Hu and Bentler 1999). Table 3 presents the standardized estimates of the factor loadings and the percentages of variance explained (R^2). The estimates of these parameters showed reliability and convergent validity. In both the first- and second-order models, the coefficients of variance explained (R^2) were acceptable because the factor loadings as a whole were significant and sufficiently high (.60 – .93). It can also be seen that the minimum values of

AVE and CRC were above .50 and .71. Therefore, they exceeded the proposed limit for acceptance of $AVE > .50$ and $CRC > .70$ (Fornel and Larcker 1981; McDonald 1985). It is also observed that the model for measuring the perceived needs in the sample analyzed and considering the operationalization of its indicators is made up of two first-order dimensions.

(Insert Table 3 here)

Once the measurement model was tested, the structural model was estimated using three latent variables, including the control variables (Table 4). This guaranteed that the effects of the global model remained stable even including the control variables. In this case (Model 4), the reasonable fit is supported by the goodness-of-fit statistics ($\chi^2 [218] = 327.81$, RMSEA= .03, SRMR= .04, and CFI= .96). The RMSEA did not exceed .07; the SRMR was not higher than .05. As the overall structural model was accepted, an analysis was performed on the significance of the standardized estimates of the structural parameters involved in the relationships proposed in the model. Thus, perceived barriers had a positive and significant effect on perceived teaching needs ($BATL \rightarrow NE = .44$, $p < .00$, $R^2 = .27$). To some extent, these results support the fact that the perception of barriers in the teaching-learning process applied to pupils with ASD entails the manifestation of greater teaching needs in terms of training, resources, and support. In turn, the direct effect of teachers' perceived needs on attitudes towards the need to transform mainstream systems of education in which pupils with ASD are enrolled is also positive and significant ($NE \rightarrow ATT_CH = .65$, $p < .00$, $R^2 = .47$). Consequently, the greater the needs perceived by teachers in their professional performance, the more they will favor the need to introduce transformations in the process of inclusion of pupils with ASD.

(Insert Table 4 here)

Finally, analysis of the control variables introduced in the model yielded results worth mentioning. Gender differences have been found in perceived barriers to the inclusion of pupils with ASD in mainstream educational settings. Thus, women scored higher on the perception of these barriers to inclusion (.16, $p < .05$). In terms of age, when compared with teachers aged 22–30 years, older teachers also perceived more significant barriers to the inclusion of children with ASD (.31, $p < .00$). Finally, the categories of the variables linked to experience with these pupils led to statistically significant differences in terms of critical attitudes in favor of a transformation of this inclusive process. All teachers who had some or many years of experience in the education of pupils with needs derived from ASD positioned themselves, with respect to those who had no experience at all, more in favor of the need to introduce changes and transformations to improve their inclusion in mainstream school settings (1–5 years: .18, $p < .05$) (6–10 years: .10, $p < .10$) (more than 10 years: .16, $p < .05$).

4. Discussion and conclusion

Identifying the barriers that lead to exclusion from classrooms and the needs of teachers are very necessary tasks. Thus, developing inclusive educational dynamics requires identifying the barriers that may exist, and addressing the needs of teachers (Kawser, Ahmed, and Ahmed 2016; López Melero 2011; Tiwari, Das, and Sharma 2015). By focusing attention on students with ASD, this research has contributed to supporting a fundamental idea: if we do not recognize the barriers to the inclusion of these children, it will be very difficult to allow them to learn and participate in inclusive classrooms. However, the teacher perceptions analyzed in this study continue to indicate that there are certain barriers to the inclusion of pupils with ASD. Despite the specific contextualization that characterizes the data collected here, it is highly likely that a

large percentage of teachers in other settings, both national and international, would express similar concerns.

Furthermore, considering perceived needs, in other studies conducted with a decidedly distinct approach, in which the study variable referred to training in inclusive education, it was found that it was precisely this training and experience that conditioned teachers' attitudes towards their work (Kuyini and Mangope 2011). This fact is echoed in other studies, such as Loreman et al. (2007). The type of specialization possessed by teachers has, therefore, been related to fostering more positive perceptions of inclusion, an example of which is also seen in the work of Johnstone and Chapman (2009). In light of this, it is surprising that this study did not find any significant differences in the needs in terms of training and resources reported by teachers in different fields of education (such as general or special education).

Previous research has also considered perceived needs as concerns reported by teachers working in inclusive schools. In this respect, coinciding with the results obtained here, Bhatnagar and Das (2013) and Aikman and Dyer (2012) conducted research and reflection studies and, among their most notable conclusions, observed a considerable level of concern on the part of these professionals in working towards more inclusive education in their schools. Their concerns were not about the excessive investment of effort and work required to contribute to the quality of this educational inclusion but rather about the education and training they had received on attending to different needs in ordinary settings. Another percentage of the sample used in their study placed greater emphasis on the need for material resources, personal resources, and other facilities to help employees perform their jobs properly. This demand coincides with the results reported by a large body of literature (Chhabra et al. 2010; Johnstone and Chapman 2009; Shah et al. 2016), which have drawn attention to the inadequacy of the material available to teachers

with which to carry out their work and the lack of funding and resources that enable them to provide support to the learning of pupils with different needs.

Despite the notable advances brought about by movements that arrived at the social model of disability, the current education system still carries certain influences from a more medical model (Haug 2017; Narayan and Schelssinger 2017). In a way, this view continues to be adopted in that the problems are located in the pupils. Therefore, in this process, the perspective of a teacher who recognizes the barriers we are still facing is established as a substantially rich aspect that leads to diverse educational possibilities. As concluded in the results of Ruiz-Bernardo's study (2016), which analyzed the perceptions of a sample of teachers and families regarding inclusive education in Peru, a teacher who reflects on the lack of training, the limitations they encounter in their work or the scarcity of personal and material resources is empowered to set out on a path of transformation towards an inclusive school.

Consequently, the fact that teachers even today perceive the existence of barriers and needs in their professional performance with pupils with ASD could be considered a positive aspect insofar as it is precisely this identification that entails a critical analysis of reality and, consequently, a process of constant transformation of current educational settings. In this sense, the teachers participating in this study were substantially in favor of a process of educational change defined by more inclusive dynamics in schools. This transformation involves the introduction of modifications at various levels. It involves modifying thoughts and attitudes, introducing organizational, curricular, and didactic changes to guarantee quality education under equal conditions for all students, and adequately addressing diverse needs. In short, the teachers in this research expressed themselves as very predisposed toward understanding inclusive education as a process of transforming the purposes and objectives of education.

Knowing how to manage and progress toward change means fundamentally having the necessary competencies to make the most of the skills, resources, and creative abilities that one already possesses. One element that exerts more pressure on the introduction of changes in educational systems is necessity, which is in line with the findings of several authors (Ainscow 2005; Sailor 2017). Bearing in mind that “necessity is the mother of invention,” those schools with the most precarious circumstances in socio-cultural terms are usually the ones that set-in motion, with the highest levels of commitment, processes aimed at accomplishing change and improvement.

In a decidedly more implicit manner, this study also called for deep reflection by professionals on their values regarding the process of educating pupils with specific needs derived from ASD. In works such as that by Glazzard (2011), two of the teachers interviewed mentioned that pupils with serious behavioral needs posed a considerable risk to the smooth functioning of the classroom. In light of the results of this work, the time has come to seriously consider the message that professionals are launching about the crucial need to continue contributing towards transformation. Authors such as Srivastava, de Boer, and Pijl (2017) proposed some years ago that this change and transformation should start from the action of teachers and from the creation of new systems within the classrooms that would allow any child to participate in different games, activities and learning pursuits. Thus, the teacher’s role is key, as they mediate the transformation of educational contexts towards inclusion. Consequently, they must be sensitive to differences and have the skills to work in complex contexts with heterogeneous groups of students.

Inclusive educators take responsibility for enabling their pupils to learn genuinely and in full accordance with their interests. Perhaps, with the structuring of a practical system tailored to

each pupil and accompanied by sufficient support for teachers in terms of training and resources (Kurniawati et al. 2014), the perceived barriers would cease to be important, as evidenced in this study. Consequently, progress in school inclusion in our system of education will only be made when all authorities, educational teams, social agents, and families are firmly committed to uncovering those who may be suffering at any given time from a situation of exclusion at school (Stainback and Stainback 1999). Even today, we continue to live in a world marked by exclusion and inequality (López Melero 2011). Finally, it should be remembered, bearing in mind the perspective of UNESCO (1994), published more than two decades ago, that education must promote, in a balanced way, the four basic pillars of the teaching-learning process: learning to know, learning to do, learning to be, and learning to live together.

The involvement of professionals working in inclusive schools in professional training and development processes is undoubtedly a key issue in inclusive education. Regardless of each individual's level of education, teachers should have basic knowledge, both theoretical and practical, regarding diversity, adaptation of the curriculum, differentiated assessment, and educational needs associated with social, cultural, and personal issues (Kurniawati et al. 2017). Both initial and continuing teacher training are part of programs that can enhance different school models. This would mean that this training could be geared towards subsequent integration into a pre-established social and school order or could be directed towards training agents with sufficient critical capacity to face reality and thus contribute to its transformation (Liston and Zeichner 1997). From this second position, which refers to critical pedagogy, the person is placed at the center of both thought and action to train teachers as agents committed to and involved in the construction of a fairer school and society.

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Table 1. Sociodemographic characteristics in the sample (N=454)

Variables	N	% of the sample
Type of school		
<i>Private</i>	71	15.6
<i>Public</i>	383	84.4
Professional role		
<i>General education teacher</i>	221	48.7
<i>Special Education Teacher and Educational Support Teams.</i>	135	29.7
<i>Masters</i>	98	21.6
Experience with pupils with ASD		
<i>I do not have experience</i>	124	27.3
<i>Between 1-5 years</i>	239	52.6
<i>Between 6-10 years</i>	52	11.4
<i>More than 10 years</i>	39	8.7
Gender		
<i>Men</i>	84	18.5
<i>Women</i>	370	81.5
Age		
<i>Between 22-30 years</i>	50	11.0
<i>Between 31-45 years</i>	205	45.1
<i>Between 46-65 years</i>	199	43.9
Academic studies		

<i>Bachelor's Degree</i>	266	58.6
<i>University Degree</i>	141	31.1
<i>Postgraduate/Doctorate</i>	47	10.4
Total	454	100

Table 2. Descriptive statistics

		Mean	SD
Perceived barriers in the T-L process of pupils with ASD			
BATL1	<i>The competitive organisation of activity in the classroom.</i>	7.63	2.35
BATL2	<i>Curriculum structured in disciplines and textbooks.</i>	8.10	2.17
BATL3	<i>Individualisation of the teachers' work.</i>	7.34	2.47
Perceived needs			
NE1	<i>Theoretical and practical training in inclusion of pupils with ASD.</i>	9.08	1.39
NE2	<i>Training in counselling for families of pupils with ASD.</i>	9.01	1.52
NE3	<i>More training in specific practices for pupils with ASD.</i>	9.18	1.31
NE1	<i>More support from specialised teachers in the classroom.</i>	9.19	1.29
NE2	<i>Additional material resources to guide learning for all.</i>	8.95	1.35
NE3	<i>More specific resources for working with pupils with ASD.</i>	9.16	1.18
NE4	<i>More time for planning collaborative work.</i>	9.27	1.16
Attitude favouring change			
		Mean	SD
ATT_CH1	<i>Removing the barriers facing these pupils would be an opportunity to enhance their participation.</i>	8.99	1.41

ATT_CH2	<i>It is necessary to involve all members of the educational community in the promotion of inclusive education.</i>	9.37	1.02
ATT_CH3	<i>An open centre project should be created that includes the needs of all.</i>	9.33	1.04
ATT_CH4	<i>The curriculum must be transformed to make it common.</i>	9.08	1.27
ATT_CH5	<i>The support offered to them should start to be considered as a right.</i>	9.35	1.18

Scale from 0 to 10.

Table 3. Measurement Model of barriers, needs and attitudes favouring change.

	BATL	<i>R</i> ²	NET	<i>R</i> ²	NER	<i>R</i> ²	ATT_CH	<i>R</i> ²	BATL	NE	ATT_CH
BATL1	0.73	0.53									
BATL2	0.83	0.69									
BATL3	0.60	0.36									
NET1			0.93	0.86							
NET2			0.84	0.71							
NET3			0.91	0.83							
NER1					0.60	0.36					
NER2					0.91	0.83					
NER3					0.93	0.86					
NER4					0.64	0.41					
ATT_CH1							0.63	0.40			
ATT_CH2							0.86	0.74			
ATT_CH3							0.77	0.59			
ATT_CH4							0.68	0.46			
ATT_CH5							0.60	0.36			
BATL									1.00		
NE									0.40	1.00	
ATT_CH									0.39	0.60	1.00
<i>α</i>	0.75		0.92		0.85		0.82				
<i>CRC</i>	0.72		0.88		0.77		0.71				
<i>AVE</i>	0.50		0.77		0.59		0.50				

χ^2 [85]=132.29 RMSEA=.04 CFI=.97 SRMR=.05

Table 4. Results of the Structural Model

	<i>Model 1</i>			<i>Model 2</i>			<i>Model 3</i>			<i>Model 4</i>		
	<i>BATL</i>	<i>NE</i>	<i>ATT_CH</i>	<i>BATL</i>	<i>NE</i>	<i>ATT_CH</i>	<i>BATL</i>	<i>NE</i>	<i>ATT_CH</i>	<i>BATL</i>	<i>NE</i>	<i>ATT_CH</i>
DIRECT EFFECTS												
Type of school												
<i>Public</i>	.07	.02	-.10*	.07	.01	-.08	.08	.02	-.70	.08	.02	-.70
Professional role												
<i>Special/Support Teams</i>				.16**	.04	.08	.11*	.05	.07	.11*	.05	.07
<i>Masters</i>				-.02	-.09	.06	.05	-.09	.05	.05	-.09	.05
Experience with TEA												
<i>Between 1-5 years</i>				-.05	.04	.17**	-.08	.02	.18**	-.08	.02	.18**
<i>Between 6-10 years</i>				.03	.05	.10*	.03	.04	.10*	.03	.04	.10*
<i>More than 10 years</i>				-.07	-.10	.15*	-.05	-.11	.16**	-.05	-.11	.16**
Gender												
<i>Women</i>							.16**	.07	-.04	.16**	.07	-.04
Age												
<i>Between 31-45 years</i>							.11	.14	.03	.11	.14	.03
<i>Between 46-65 years</i>							.31***	.08	.03	.31***	.08	.03
Academic studies												
<i>University Degree</i>							.05	-.09	.03	.05	-.09	.03
<i>Postgraduate/Doctorate</i>							.07	.00	.07	.07	.00	.07
BATL											.44***	
NE												.65***
R²	.004	.22	.42	.04	.24	.46	.12	.27	.47	.12	.27	.47
Goodness of fit:	χ^2 [98]=156.72			χ^2 [158]=237.23			χ^2 [218]=327.81			χ^2 [218]=327.81		
	RMSEA=.04 CFI=.97			RMSEA=.03 CFI=.96			RMSEA=.03 CFI=.96			RMSEA=.03 CFI=.96		
	SRMR=.05			SRMR=.04			SRMR=.04			SRMR=.04		

Figure 1 Study approach

