

TEACHER EFFICACY FOR INCLUSIVE PRACTICES (TEIP) SCALE VALIDATION¹

ESCALA DE EFICÁCIA DOCENTE PARA PRÁTICAS INCLUSIVAS: VALIDAÇÃO DA TEACHER EFFICACY FOR INCLUSIVE PRACTICES (TEIP) SCALE

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ABSTRACT: The purpose of this research was to analyze the psychometric properties of the Brazilian version of *Teacher Efficacy for Inclusive Practices (TEIP) Scale*. The version translated and adapted to Brazilian culture is called *Escala de Eficácia Docente para Práticas Inclusivas (EEDPI)* and was applied to a sample of 308 teachers of Early Childhood Education and Elementary Education I and II, in the state of Mato Grosso do Sul. The Factorial Exploratory Analysis showed that its psychometric properties are adequate, as well as the existence of two factors, named “Classroom management” and “Planning and collaboration”. The same sample also responded to the *Teacher self-efficacy Scale: short version*, considered “gold standard”, in order to evaluate the efficacy of the EEDPI in measuring what it proposes, based on the relation with an external criterion. Spearman’s Correlation Analysis revealed the existence of a positive correlation between the subscales of the instruments, ranging from moderate to strong. The EEDPI still presents good internal consistency (Cronbach’s alpha coefficients 0.89, 0.88 and 0.92) and it is an instrument that can aid in the evaluation and monitoring of teacher self-efficacy in view of the inclusion and proposition of the appropriate interventions.

KEYWORDS: Special Education. Inclusive education. Efficacy. Measuring instruments.

RESUMO: O objetivo desta pesquisa foi analisar as propriedades psicométricas da versão brasileira da *Teacher Efficacy for Inclusive Practices (TEIP) Scale*. A versão traduzida e adaptada à cultura brasileira denomina-se *Escala de Eficácia Docente para Práticas Inclusivas (EEDPI)* e foi aplicada a uma amostra de 308 professores de Educação Infantil e Ensino Fundamental I e II, no interior do estado de Mato Grosso do Sul. A Análise Fatorial Exploratória evidenciou que suas propriedades psicométricas são adequadas, bem como a existência de dois fatores, nomeados “Regência em sala de aula” e “Planejamento e colaboração”. A mesma amostra também respondeu à *Escala de autoeficácia de professores: versão breve*, considerada “padrão-ouro”, a fim de avaliarmos o grau de eficácia da EEDPI em medir o que se propõe, a partir da relação com um critério externo. A Análise de Correlação de Spearman revelou a existência de uma correlação positiva entre as subescalas dos instrumentos, oscilando entre moderada e forte. A EEDPI ainda apresenta boa consistência interna (coeficientes de Alfa de Cronbach 0,89, 0,88 e 0,92) e mostra-se um instrumento que pode auxiliar na avaliação e no acompanhamento da autoeficácia docente diante da inclusão e na proposição das intervenções oportunas.

PALAVRAS-CHAVE: Educação Especial. Educação inclusiva. Eficácia. Instrumentos de mensuração.

1 INTRODUCTION

Self-efficacy corresponds to the *beliefs* that the individual has about his/her abilities, with the purpose of organizing and performing the actions necessary for the production of certain achievements (Bandura, 1997). In this sense, motivation, affective state and human actions depend more on what one believes to be real than what it really is, so that one’s perceptions alter the judgment and use of one’s knowledge and skills (Bandura, 1997; Pajares & Olaz, 2008).

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This means that the individual's expectations about his/her personal efficacy determine whether a given behavior will be initiated, the level of effort that will be spent, how long he/she will face obstacles and aversive experiences, the amount of stress he/she will experience when coping with environmental demands, and even his/her vulnerability to depression (Bandura, 1978, 2008). Strong self-efficacy beliefs allow a serene state to be maintained in the face of difficult activities, while weakened beliefs tend to lead to the perception that the task offers an unrealistic level of complexity, generating anxiety and stress (Pajares & Olaz, 2008).

Self-efficacy acts on cognitive, motivational, affective and selective processes (Andreu, Pallarés & Juárez, 2004; Bandura, 1997; Navarro, 2007). These will be presented separately for didactic purposes only, as they regulate human functioning in an integrated manner. In the cognitive aspect, self-efficacy will influence the positivity or negativity of the thoughts that precede actions, leading to the establishment of goals and commitment to them, in order to favor or inhibit a given conduct. Thus, high beliefs are related to ambitious goals and great dedication to achieve them (Andreu, Pallarés, & Juárez, 2004; Bandura, 1997; Navarro, 2007). Similarly, goals considered unattainable are not established (Martínez, 2004); therefore, the role of cognition in the acquisition and regulation of behavior is emphasized, highlighting that fleeting experiences can cause lasting effects, as they are codified and retained in memory (Bandura, 1978). By suggesting the disposition of thought, efficacy beliefs affect an individual's understanding of his/her existential circumstances, since, with high self-efficacy, the focus of his/her attention is on current life opportunities (Bandura, 2008, 2009). According to the author:

Through ingenuity and perseverance they figure out ways of exercising some measure of control even in environments of limited opportunities and many constraints. Those beset with self-doubts dwell on impediments which they view as obstacles over which they can exert little control. They easily convince themselves of the futility of effort so they achieve limited success even in environments that provide many opportunities. (Bandura, 2009, p. 181).

Considering that motivation tends to result from cognition, consequently it will be affected by the anticipation of the results of conduct, acting on the will and the effort made to achieve success (Andreu, Pallarés, & Juárez, 2004; Bandura, 1997; Navarro, 2007). Thus, levels of self-efficacy can increase or compromise motivation, as people who have doubts about themselves find it difficult to motivate themselves (Schwarzer & Schmitz, 2004), as, when there is no belief that their actions can promote the desired results and avoid the unwanted, they lack the incentive and perseverance to act and face obstacles, so that any motivational factor carries at its core the sense that the conduct can promote the intended change/outcome (Bandura, 2008, 2009). Bandura (1997) states that the best skills can be invalidated by personal doubts about one's own ability to perform and, therefore, different people with similar skills or the same person in different circumstances may exhibit extremely varied performances. Similarly, highly talented individuals may have accomplishments that fall short of their abilities when their self-efficacy beliefs are deteriorated.

To the extent that self-efficacy has influence on human behavior, teaching practice could not be exempt from its effects, since self-efficacy plays a mediating role in this practice, because it acts on the cognitive, motivational and behavioral aspects of educators, influencing

their choices, persistence in the face of obstacles, motivation for certain behaviors, and feelings about the choices made. “For example, teachers with high self-efficacy for using movies as a lesson strategy will persist more in discussing complex movies than teachers with low self-efficacy” (Azzi, Polydoro, & Bzuneck, 2006, p. 151). In addition to being related to the didactic options and the way to conduct the educational process, teacher self-efficacy is associated with the students’ academic success (Bandura & Pajares, 2007), their aspirations and conceptions about themselves (Bandura, 1997). This is one of the most impactful teaching characteristics on student achievement (Navarro, 2007).

Tschannen-Moran and Woolfolk Hoy (2001) understand teacher self-efficacy as the teacher’s assessment of their own ability to teach and motivate all students, regardless of the difficulties they may have. Their sources are the same as those of general self-efficacy: domain experiences, vicarious experiences, verbal or social persuasion, and physiological and affective states. The importance of their strengthening stems from the implications of teachers’ beliefs on their teaching skills on the conduct of the teaching-learning process.

The difficulties present in the teaching-learning process are understood by teachers with robust beliefs, in their teaching skills, as surmountable obstacles, starting from ingenuity and additional effort, instead of placing the responsibility for student learning failure (Bandura, 1997). Among the many challenges that educators face, we emphasize school inclusion, largely supported by our legislation (Law no. 9,394 of December 20, 1996); however, far from being effective with quality and guarantee of learning and development for all (Carvalho, 2016). Although inclusion has been a commitment for more than two decades, it is still viewed with some unfamiliarity as student diversity and the break with school standardization are processually being integrated into the social imaginary. As a result, they challenge teachers to deconstruct conceptions and practices that are not always supported by favorable conditions in terms of physical structure, student numbers, available human and material resources, continuing education, and so forth.

Considering the difficulties of our educational system in achieving the inclusion of the public of Special Education (Carvalho, 2016), as well as the implications of this process for teachers (Vitaliano & Valente, 2010), we emphasize the relevance of the instruments capable of measuring teacher self-efficacy for inclusive education, so that they can guide the necessary interventions, especially the formative ones, because, according to Bzuneck (1996), the proper understanding of the behavioral and motivational aspects of teachers requires the identification of teachers’ self-efficacy beliefs, especially when it is intended to promote changes in their pedagogical practices. In this sense, the objective of this research is to analyze the psychometric properties of the Brazilian version of the Teacher Efficacy for Inclusive Practices (TEIP) Scale (Sharma, Loreman, & Forlin, 2012).

2 METHOD

Initially, we contacted the first author of TEIP via e-mail to request permission to translate it and adapt it to the Brazilian reality. The authorization was immediate and accompanied by a request for a feedback at the end of the research. The translation and cross-

cultural adaptation⁴ of the instrument followed the steps suggested by Guillemin, Bombardier and Beaton (1993).

The validation process involved 40 schools, divided into state and municipal schools and private schools, of Early Childhood Education (final grades, preschool), Elementary School I and II, from the cities of Corumbá and Ladário, in the state of Mato Grosso do Sul, Brazil.

The Portuguese version, called *Escala de Eficácia Docente para Práticas Inclusivas* (EEDPI) - *Teacher Efficacy for Inclusive Practices Scale*, was answered by 346 teachers. This is a convenience sample, not a random one. We discarded 38 completed scales because they were incomplete, resulting in a total of 308 instruments analyzed. The distribution of the variables was examined with the Kolmogorov-Smirnov test, which revealed the non-normality of the distributions ($p < 0.001$).

2.1 CHARACTERIZATION OF PARTICIPANTS

Among the 308 participants, the majority (259) were female, corresponding to 84.09% of the sample. Ages ranged from 20 to 66 years, with a median of 39 years, first quartile (Q1) of 32, and third quartile (Q3) of 47 years. Regarding the time of teaching, there was a variation of less than one to 37 years of practice, being the median of 10 years, with Q1 of 5.75 and Q3 of 20 years. Table 1 shows the distribution of teachers according to their initial education.

Initial Education	n	%
Pedagogy	135	43.83
Undergraduate Teaching Degree	115	37.34
Teaching and Pedagogy	37	12.01
High School Teaching Degree and Undergraduate Teaching Degree	13	4.22
Pedagogy and Undergraduate Teaching Degree	4	1.30
High School Teaching Degree	4	1.30
Total	308	100.00

Table 1. Distribution of participating teachers according to the initial education presented.

Source: Elaborated by the authors.

With regard to education, 151 teachers (49.02%) had graduate courses at lato sensu level, of which 12 (3.9%) were specialists in Special Education or Inclusive Education. In addition, 18 teachers (5.84%) had a master's and/or doctorate in Education or other areas related to the initial education.

A total of 186 teachers (60.39%) reported working with the Special Education audience at some point. Regarding the type of institutional administration, 213 teachers were from municipal schools; 54 from state schools; and 41 from private schools. Most teachers

⁴ This process included independent translations and back-translations, as well as semantic, idiomatic, content and concept equivalence analyzes carried out by a committee composed of researchers and education professionals with English language skills.

worked in Elementary School I (51.1%); some in Elementary School II (30.5%); and extent, few teachers in Early Childhood Education (18.4%).

2.2 INSTRUMENTS

Study participants were invited to complete a characterization sheet, the *EEDPI* and the Teacher self-efficacy scale: short version, prepared by Tschannen-Moran and Woolfolk Hoy (2001). Both scales are of the Likert type and have six response options in each statement.

The version of the *EEDPI* answered by the participants, as well as the original English version, contained 18 items designed to measure teacher self-efficacy to develop inclusive school practices, including the use of educational strategies that promote inclusion, and management of classroom behavior and working together with family members and other professionals.

The Teacher Self-efficacy Scale: short version (Tschannen-Moran & Woolfolk Hoy, 2001), with 12 items, was translated, adapted and used by Casanova (2013) and Almeida (2016) with Elementary and High School teachers, being validated by the Exploratory Factor Analysis in both studies. The application of this scale occurred to verify the validity of the *EEDPI* criterion, that is, to evaluate the degree of efficacy of the test in measuring what it proposes, from the relationship with an external criterion (Souza, Alexandre, & Guirardello, 2017); in this case, the Teacher Self-efficacy Scale: short version, considered the “gold standard”.

Criterion validity of a target test (under evaluation) is analyzed by comparing its results to a “gold standard” or criterion test, that is, a widely accepted measure that has the same characteristics as the target test. When the results of both are in agreement, it means that the target test measures what it is intended to measure (Souza, Alexandre, & Guirardello, 2017).

The option for the Teacher Self-efficacy Scale: short version took place because, according to Woolfolk Hoy and Burke-Spero (2005), this scale is “superior to previous measures of teacher efficacy” (p. 354). Klassen, Tze, Betts and Gordon (2011) state that the short and long-scale versions of the teachers sense of efficacy, created by Tschannen-Moran and Woolfolk Hoy (2001), are among the best suited to the theory’s assumptions and, therefore, they are well recommended and have been used in 16 studies published in the decade in which Klassen et al. (2011) revised them. In Brazil, three factors were also resolved, as in the original: Self-efficacy for student engagement, instructional strategies, and classroom management (Almeida, 2016; Casanova, 2013).

2.3 DATA COLLECTION PROCEDURES

We went personally to each of the 40 schools, talked to managers to explain the purpose of the study, and asked permission to invite teachers to participate in the research. In some institutions, we were not allowed to have direct contact with the teachers, so we left the scales with the board and returned at a previously agreed date to pick them up (brokered delivery). On the one hand, in such cases, the return tended to be low. On the other hand, we were able to go through all the rooms of other schools, to talk with the teachers individually and to give them the instruments (direct delivery). In this way, we got a larger feedback, because

we had a control of the teachers who had or not delivered, and we returned to the institutions several times to collect the scales with those who had forgotten or needed more time to answer them. Even so, the return rate was low, as we had distributed about 750 instruments.

2.4 DATA ANALYSIS

We used the Microsoft Excel spreadsheet from the Office package, version 2013, for data systematization, and the statistical package IBM Statistical Package for Social Sciences (SPSS), version 22.0, for statistical analysis.

The *EEDPI* was submitted to the following analytical procedures: we performed the Kaiser-Meyer-Olkin (KMO) and Bartlett's sphericity tests in order to evaluate the validity of the exploratory factor analysis (EFA). Having obtained good results, we evaluated the relational structure based on EFA, with extraction of the main components, followed by Varimax rotation. Initially, it was decided to retain the components with eigenvalue greater than 1, considering also the Scree plot, since the establishment of a single criterion may cause the retention of more or less factors than those necessary for the description of the latent structure (Marôco, 2014). This decision led us, in a second moment, to fix the number of factors to be extracted.

For the item to be included in a factor, it should have a coefficient greater than 0.45 factor load. Based on Comrey and Lee (1992), Laros (2005) clarifies that factor loadings greater than 0.71 are considered excellent, as well as those greater than 0.63 are considered very good, those exceeding 0.55 are good and those greater than 0.45 are regular; factor loadings less than 0.45 are considered poor.

The analysis of the internal consistency of the instrument was performed using Cronbach's alpha coefficient, considering the coefficients from 0.70 as acceptable. In addition, the Spearman Correlation Analysis (Rs) was applied to verify the relationship levels between the variables of the scales. In addition, the significance level of 0.05 was accepted.

Each participant's scales were given an individual score based on the average of the answers, dividing the total score by the number of items, so that both the *EEDPI* and the Teacher Self-efficacy Scale: short version received at least 1 and at most 6 points, favoring the comparison between them, resulting from the analysis of variations, medians and interquartile intervals.

3 RESULTS

The distribution of the results in the scale items was adequate for the factorial analysis, presenting KMO of 0.90 and Bartlett's sphericity test of $X^2 = 3363.13$ (gl = 153, p 0.001), considered highly significant.

The option was to analyze the main components, differing the factors to be isolated based on eigenvalue equal to or greater than the unit. Such analysis concluded by three factors, all with values above 1, corroborating the findings of Sharma, Loreman e Forlin (2012), in the construction of its original version, but with distinct organization. The relevance of these three factors can be found in the Scree Plot, as shown in Figure 1.

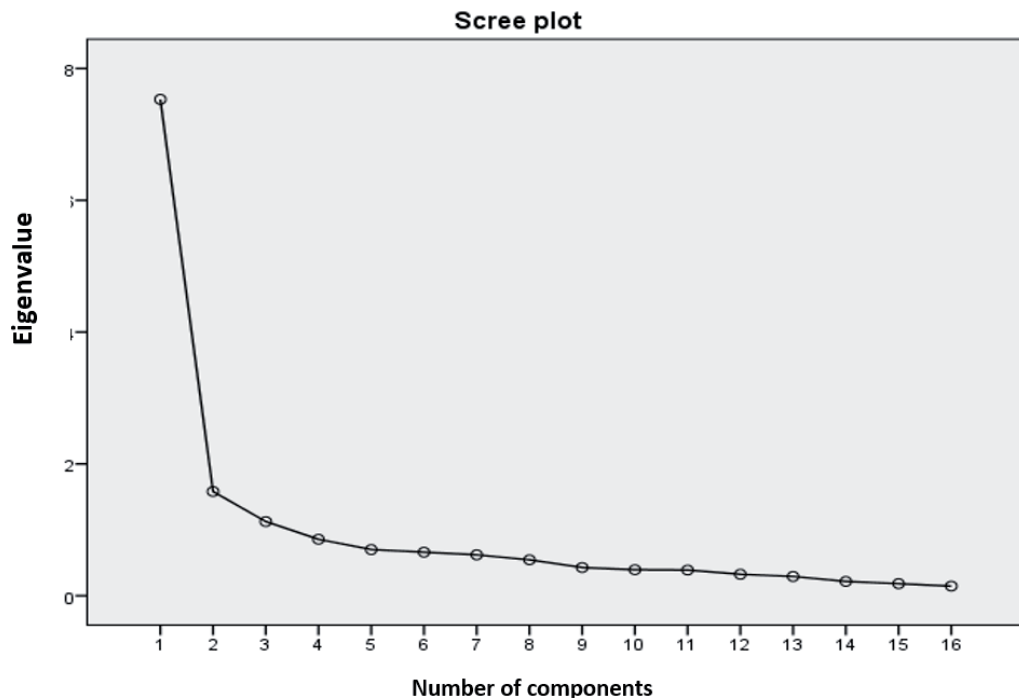


Figure 1. Declivity with main components of the Teacher Efficacy for Inclusive Practices Scale. Source: Elaborated by the authors from the SPSS software.

The three factors obtained in EFA explained 62.27% of the total variance. By analyzing the content of the items grouped in the first factor, we found that they all related to the teacher's behaviors in terms of classroom conduct (avoiding inappropriate behavior, assessing student comprehension, proposing appropriate challenges, etc.), explaining 46.96% of the variance. The second factor, which grouped the items related to students with specific demands (aggressive, confused, disabled students), explained 8.82% of the variance. Factor 3, whose content referred to the relationship with families, explained 6.50% of the total variance.

Although the number of factors obtained is identical to that of the original scale, the typology of the items in each of them and the significance we assigned to the three dimensions differ substantially. At the same time, one of the factors points to two items (Factor 3), yet there is item 18 (providing examples and alternative explanations when students are confused), which extracted the same value in two factors, similarly to item 9 (ability to involve parents in the school activities of their disabled children), with double saturation.

Despite the relevance of the third factor being indicated by the declivity graph (Figure 1), Tabachnick and Fidell (2013) recommend caution in interpreting factors defined by only two items because of their questionable reliability. In fact, it would be meaningless to maintain a dimension with so few items. At the same time, the interaction between school and family is of great importance to the teaching and learning process, especially in school inclusion, which

would not justify the exclusion of these items. Thus, we undertook a new analysis, fixing the extraction of two factors.

From the analysis of the factor weights with the delimitation of the extraction of two factors, we obtained the explanation of 55.78% of the variance. The saturation of the items ranged from 0.45 to 0.82, while the commonality of items 1, 3 and 4 was less than 50% (0.36, 0.33 and 0.35), indicating little common variance in these variables, but within the acceptable level (Tabachnick & Fidell, 2013).

The restructuring of the scale, based on the fixation of two factors, resolved the double saturation of item 9. However, item 18 remained with high saturation in factors 1 and 2 and another item was born loaded in both: number 14. Item 18 concerns offering other explanations or examples when students are confused, so we find it appropriate to exclude them. Item 14, which concerns joint work among students, was considered indispensable, both for the importance of the other in learning and for the existence of positive social interaction as one of the indicators of successful school inclusion.

Next, the content and the relationship between the items of each factor were analyzed. Therefore, there is the first factor with high factor weights in the statements regarding the management of behaviors and teaching strategies, being called "Classroom management". The second factor demonstrates high factor loadings in the ability to work together with other professionals and plan activities, called "Planning and collaboration". At that time, we noticed the inadequacy of item 17, which referred to ways of dealing with physically aggressive students. Moreover, the creators of the original version of the instrument certainly linked the possibility of aggression to the particularities of certain audiences belonging to the Special Education. However, Brazilian education is marked by the unfortunate situations in which teachers are victims of verbal and physical aggression by their students (Soares & Machado, 2014), which makes the total agreement of educators with the statement "I feel confident to deal with physically aggressive students". Given the little coherence of this statement with the remaining items of the dimension, we decided to eliminate it.

The appropriateness of item 15 was also questioned, as it is related to the use of diversified assessment strategies, fitting in the dimension of "Classroom management". However, a diversified assessment goes beyond the application of tests and direct observation of behavior, and may involve families and other professionals, especially regarding the public student of Special Education. In addition to requiring planning, reflection and decision making, these are processes that are not restricted to the classroom space, justifying their approach to the other items of Factor 2, related to teaching activities performed outside the classroom (planning, relationship with parents, collaborative work with other professionals, knowledge of inclusive legislation).

In the 16-item version of the EFA, we maintained the option to extract the main components, with two-factor fixation and Varimax rotation. Based on this analysis, 56.95% of the total variance is explained. Table 2 systematizes the results obtained.

Number	Item	Factor 1	Factor 2	h ²
1	I can make clear to the students what my expectations are about their behavior.	0.56		0.36
2	I am able to calm down a disruptive/noisy student.	0.74		0.61
3	I can make parents feel comfortable to come to school.		0.47	0.35
4	I can help families to help their children do well in school (in terms of learning, interaction, and behavior).		0.49	0.37
5	I can accurately assess the student's understanding of what I taught.	0.68		0.60
6	I can propose appropriate challenges to very capable students.	0.67		0.51
7	I have confidence in my ability to avoid disruptive behavior in the classroom.	0.82		0.72
8	I can control disruptive behaviors in the classroom.	0.82		0.70
9	I have confidence in my ability to involve parents in the school activities of their children with disabilities.		0.77	0.66
10	I have confidence in planning educational activities so that the individual needs of students with disabilities are adequately addressed.		0.74	0.63
11	I can make children follow the rules of the classroom.	0.75		0.63
12	I can work collaboratively with other professionals (e.g. itinerant teachers; specialists; ESA teacher; Brazilian Sign Language interpreter, etc.) in developing educational plans for students with disabilities.		0.78	0.65
13	I can work together with other professionals and staff (e.g. assistants, other teachers) to teach students with disabilities in the classroom.		0.80	0.68
14	I have confidence in my ability to get students to work together in pairs or in small groups.	0.58		0.56
15	I am able to use a variety of evaluation strategies (e.g. portfolio evaluation, tailored testing, performance-based assessment, etc.).		0.63	0.58
16	I am confident in providing information about laws and policies regarding the inclusion of students with disabilities to people who know little about this subject.		0.69	0.51
Number of Items		8	8	
<i>eigenvalue</i>		7.53	1.58	
% of variance		47.07	9.88	
Cronbach's Alpha		0.89	0.88	0.92

Table 2. Factor load distribution, commonality, eigenvalue of factors, percentage of variance explained and internal consistency indices of the Teacher Efficacy for Inclusive Practices Scale with 16 items.

Source: Elaborated by the authors.

Factor 1 represents 47.07% of the total variance and carries eight items linked to “Classroom management”. Factor 2 explains 9.88% and includes items associated with “Planning and collaboration”. Cronbach’s alpha of the 16-item scale was 0.92, with 0.89 for Factor 1 and 0.88 for Factor 2, showing high internal consistency. If any of the items in this resolution were excluded, Cronbach’s Alpha would remain at 0.92. Thus, it is proposed to use this version of the Teacher Efficacy for Inclusive Practices Scale with 16 items, which shows appropriate psychometric property.

Next, we descriptively analyze the frequencies of the data obtained in completing the two scales.

3.1 RELATING THE SCALES

The Teacher Self-efficacy Scale: short version has 12 items, so that the respondent should indicate a number from one to six, according to how effective it was for each educational activity. For the sum of the points attributed to the items, there is an individual score that can vary from 12 to 72. The *EEDPI* also presents six answer options, the number one representing a total disagreement of the statement; and number six its full agreement. Containing 16 items, the individual score can range from 16 to 96. In order to favor the comparison between the results of the instruments, we chose to assign, just like Bzuneck (1996), when applying the Woolfolk and Hoy’s (1990) scale, a score obtained from a measure of central tendency, in this case the average. Given the abnormal distribution of our sample, we calculated the medians of the scales and subscales whose scores could range from 1 to 6.

Bzuneck (1996) interpreted the six-point scale, whose alternatives expressed total disagreement with total agreement, according to three intervals: means below three were considered low; from three and under five, intermediate, and averages between five and six were classified as high. In contrast, we chose to interpret the results using five intervals, understanding that a score between 1 and 1.99 is between disagreement and total disagreement about the sense of effectiveness, which means very low self-efficacy; scores between 2 and 2.99 represent the variation between disagreement and partial disagreement, in order to evidence low self-efficacy; between 3 and 3.99 points, there is the oscillation between disagreement and partial agreement, interpreted as mean self-efficacy; between 4 and 4.99, the alternation between “partially agree” and “agree”, understood as high self-efficacy, and the variation between 5 and 6 points, being between agreement and total agreement, represents very high self-efficacy. In Tables 3 and 4, the results of the scales are summarized.

Dimensions	Variation (min – max)	Median	Dispersion (Q1-Q3)*
Student engagement	1.50 - 6	5.00	5.75 – 4.50
Class management	2.06 - 6	4.94	5.55 – 4.31
Instructional Strategies	2.50 - 6	4.75	5.50 – 4.25
Full scale	2.67 - 6	4.92	5.42 – 4.33

Table 3. Scores obtained in the Teacher self-efficacy scale: short version.

Source: Elaborated by the authors.

Note: * Interquartile Range.

Dimensions	Variation (min – max)	Median	Dispersion (Q1-Q3)*
Class management	2.63 - 6	5.00	5.50 – 4.63
Planning and collaboration	1.75 - 6	4.88	5,25 – 4.38
Full scale	2.56 - 6	4.94	5.37 – 4.50

Table 4. Scores obtained in the Teacher efficacy for inclusive practices scale.

Source: Elaborated by the authors.

Note: * Interquartile Range.

When considering the full scale scores shown in Tables 3 and 4, we note that, generically, the teachers participating in the study show high-level of self-efficacy for both inclusive (EEDPI) and pedagogical practices in general, indicating that there is a Positive relationship between teacher self-efficacy for teaching and teacher self-efficacy for the inclusion of students with special needs. From this perspective, it is assumed that scales measure the same construct: self-efficacy.

The median *EEDPI* score obtained by the teacher pool in our sample is consistent with the self-efficacy level of teachers from other countries in response to the original TEIP version: Canada, 4.51, Australia, 4.53 and Bangladesh, 4.84, being higher than that presented by teachers from Indonesia, 4.38 and from China, 3.93 (Ahsan, Deppeler, & Sharma, 2013; Loreman, Sharma, & Forlin, 2013). In this regard, in addition to contextual diversity, Loreman, Sharma e Forlin (2013) emphasize the existing cultural differences, which cannot be generalized between East versus West, because there are regional, and even individual, peculiarities regarding the different countries.

Next, we verified the degree of relationship between the variables of the scales, through Spearman's Correlation Analysis, as shown in Table 5.

Variable	[E1] Student engagement	[E1] Class management	[E1] Instructional strategies	[E2] Classroom management skills	[E2] Planning and collaboration
[E1] Student engagement	1				
[E1] Class management	+0.71*	1			
[E1] Instructional strategies	+0.67*	+0.57*	1		
[E2] Classroom management skills	+0.58*	+0.52*	+0.49*	1	
[E2] Planning and collaboration	+0.60*	+0.41*	+0.49*	+0.70*	1

Table 5. Correlation matrix between the variables emerged in the factor analysis of the two scales.

Source: Elaborated by the authors.

Notes: * $p < 0,001$

E1 –Teacher self-efficacy scale: short version

E2 – Teaching Efficacy for Inclusive Practices Scale

Table 5 shows a high level of significance ($p < 0.001$) between correlations, $n = 308$. The variables of the Teacher Self-efficacy Scale: short version correlate strongly and positively, with coefficients of 0.71, 0.67 and 0.57. The subscales of the Teacher Efficacy for Inclusive Practices Scale also show strong positive correlation with $R_s = 0.70$. In the correlation between the subscales of the two instruments, we found the coefficients 0.58, 0.52, 0.49, 0.60, 0.41, 0.49, which allow us to perceive the existence of a positive correlation, ranging from moderate to strong.

The moderate correlation between the two scales can be interpreted as a result of their specificity because, although both are intended to measure teacher self-efficacy, the Teacher Self-efficacy Scale: short version addresses teaching in general, while *EEDPI* focuses on inclusive educational practices. The relevance of a scale that assesses teacher self-efficacy for school inclusion is justified by the knowledge and skills that teachers need to have in order to meet educationally the particularities of the teaching and learning process of the Special Education public, which may demand methodological, curricular, material and instructional differences (Loreman, Sharma, & Forlin, 2013).

The positive correlation between the *EEDPI* and the scale taken as the “gold standard” attests to its criterion validity, since, in fact, the instrument measures what it intends to measure. Thus, it is established as a tool for evaluating teacher self-efficacy for inclusive practices in Brazil. According to Bzuneck (1996), before attempting to influence teachers’ behavior, it is advisable to start by identifying their beliefs, especially those of self-efficacy.

Individuals’ actions are more linked to their beliefs about their capacities (self-efficacy) than their own capacities, since these beliefs drive their accomplishments. According to Navarro (2007), beliefs do not always correspond to reality, so there are people who carry doubts about their abilities, even if they clearly possess them, while others completely believe that they are effective in behaviors to which they lack skills. Belief in one’s own efficacy is no guarantee of success, but it provides the motivation necessary to initiate and persist in a particular action, aiming at the desired results.

Self-efficacy beliefs correspond to what the individual believes about his or her ability to perform a specific task (Azzi & Polydoro, 2006). To Navarro (2007):

Teachers show themselves effective in teaching a particular subject to certain students and in a specific situation, and these beliefs may vary under different conditions. Therefore, to make a judgment about teacher self-efficacy it is necessary to take into account the specific teaching activity and the context in which it is developed. (p. 133).

Teacher self-efficacy influences the way teachers think about themselves, so as to act on the tendency towards optimism or pessimism, motivation, coping with difficult situations and the choices made (Navarro, 2007). Thus, it is a very important construct for school inclusion, due to its regulatory role in teaching practices (Loreman, Sharma, & Forlin, 2013).

In this sense, it is imperative to strive for the strengthening of teachers’ self-efficacy, because, although this in itself is not a guarantee of good results, its absence affects the beginning, the effort and the persistence in tasks for which they consider themselves unsuitable.

4 FINAL CONSIDERATIONS

Teacher self-efficacy plays an important role in regulating teacher behavior when influencing student dedication, performance, and encouragement while conducting the teaching and learning process. Because it is a specific concept, a teacher may feel able to perform one task and inefficient for another; therefore, believing in his/her own ability to teach Mathematics does not mean that his/her beliefs related to arts teaching are positive. Transposing the argument into the context of inclusive education, a teacher with high self-efficacy for pedagogical work may generally feel unable to teach a student belonging to the Special Education audience. Therefore, it is important to measure teacher self-efficacy for inclusive practices and develop timely actions in view of the finding of deficient beliefs. From this perspective, it is proposed to use the Teacher Efficacy for Inclusive Practices Scale, a version translated and adapted to the Brazilian reality, whose psychometric qualities are adequate. It is suggested that this scale be applied in different contexts and populations in order to contribute to its validation.

In fact, it is important to highlight the contributions of this research in relation to the advance of the state of the art in epistemological terms, since it broadens the discussions of the Special Education area in Brazil by highlighting the influences of teachers' self-efficacy beliefs in the effectiveness of school inclusion and introducing a scale that consists of a new source of knowledge, with validity and reliability, which represents the first instrument of teacher self-efficacy for inclusive practices rigorously validated at the national level, which gives it the character of unprecedentedness.

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