

**PEDAGOGICAL PRACTICES IN SPECIAL EDUCATION, TEACHER TRAINING  
AND ACTION RESEARCH: WHAT THE STUDIES SAY<sup>1</sup>**

***PRÁTICAS PEDAGÓGICAS NA EDUCAÇÃO ESPECIAL, FORMAÇÃO DOCENTE E  
PESQUISA-AÇÃO: O QUE DIZEM AS PESQUISAS***

***PRÁCTICAS PEDAGÓGICAS EN EDUCACIÓN ESPECIAL, FORMACIÓN DEL  
PROFESORADO E INVESTIGACIÓN-ACCIÓN: QUÉ DICEN LAS  
INVESTIGACIONES***

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**ABSTRACT:** The study aimed to identify and analyze what has been produced in the academic field about pedagogical practices in special education from 2008 to 2020. A systematic literature review was carried out that articulates the themes that involve inclusive pedagogical practices in special education, teacher training, action research. The search was carried out by combining the descriptors: Inclusion, Special Education, Inclusive Education with the descriptors Action Research, Collaborative Research. 193 articles were found, of which 44 articles approached the topic. It was observed that most publications on the subject occurred after the enactment, in 2015, of the Brazilian law for the Inclusion of Persons with Disabilities. Furthermore, it was possible to identify that action research appears as an important theoretical-methodological instrument for the development of more effective pedagogical practices and for the continuing education of Special Education teachers.

**KEYWORDS:** Action research. Special education. Pedagogical practices.

**RESUMO:** O estudo teve por objetivo identificar e analisar o que tem sido produzido academicamente sobre as práticas pedagógicas no campo da educação especial no período de 2008 a 2020. Trata-se de uma revisão sistemática de literatura que articula as temáticas que envolvem as práticas pedagógicas inclusivas na educação especial, formação docente e pesquisa-ação. A busca foi feita a partir da combinação entre os descritores: Inclusão, Educação Especial, Educação Inclusiva com os descritores Pesquisa-ação, Pesquisa Participante e Pesquisa Colaborativa. Foram encontrados 193 artigos, dos quais 44 artigos se aproximavam do tema. Como resultado foi observado que o maior número de publicações sobre o tema ocorreu após a promulgação, em 2015, da lei Brasileira de Inclusão da Pessoa com Deficiência. Além disso, foi possível identificar que a pesquisa-ação aparece como importante instrumento teórico-metodológico para o desenvolvimento de práticas

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*pedagógicas mais efetivas e para a formação continuada de professores da Educação Especial.*

**PALAVRAS-CHAVE:** *Pesquisa-ação. Educação especial. Práticas pedagógicas.*

**RESUMEN:** *El estudio tuvo como objetivo identificar y analizar lo que se ha producido en el campo académico sobre las prácticas pedagógicas en educación especial de 2008 a 2020. Se realizó una revisión sistemática de la literatura que articula las temáticas que involucran las prácticas pedagógicas inclusivas en educación especial, formación docente, investigación-acción. La búsqueda se realizó combinando los descriptores: Inclusión, Educación Especial, Educación Inclusiva con los descriptores Investigación-acción, Investigación Participativa e Investigación Colaborativa. Se encontraron un total de 193 artículos, de los cuales 44 artículos abordaron el tema. En conclusión, se observó que la mayoría de las publicaciones sobre el tema ocurrieron después de la promulgación, en 2015, de la Ley Brasileña de Inclusión de Personas con Discapacidad. Además, fue posible identificar que la investigación-acción aparece como un importante instrumento teórico-metodológico para el desarrollo de prácticas pedagógicas más efectivas y para la formación permanente de profesores de Educación Especial.*

**PALABRAS CLAVE:** *Investigación-acción. Educación especial. Práticas pedagógicas.*

## Introduction

Currently, we see an increase in the number of students targeted for special education (PAEE in the Portuguese acronym) enrolled in the regular education system, as a result of the inclusion movement and policies established by the government (FRANCO; RODRIGUES, 2016). Concurrently with this, the literature and the production of research that address the issue of school inclusion - remembering that Special Education (SE) is only one part of what is understood as Inclusive Education - has advanced greatly. The need for the whole school community, such as families and teachers, to deal with the diversity found in schools has been noted. Although there is this need and a whole movement that calls for a society that values the diversity of subjects, we still see several problems, such as the lack of resources in schools, government processes and programs for teacher training that are not very effective and that do not qualify them to work in the field of inclusion of people with disabilities, training policies that do not address diversity, teachers who feel unprepared to work, among others (MATOS; MENDES, 2014; MENDES, 2006).

When thinking about education for all, we need to think about a transforming and democratic school, giving priority to collective social/cultural exchanges, and taking into consideration that each student learns in a unique way, from his or her life story and in social

relationships with others. In this way, it is urgent to think of an education that meets the needs of its students, and escapes from the view of tolerance in the sense of compassion, and that does not consider the students' learning difficulties as fixed, but as singularities that constitute this subject (MANTOAN, 2003).

The proposal developed in this study is centered on the pedagogical practices performed by teachers in the field of special education, especially from the perspective of school inclusion. Moreover, it seeks to identify how teacher training, action research and inclusive pedagogical practices, in special education, are articulated. By choosing as methodology the systematic literature review, we intended to identify and analyze what has been produced academically about the pedagogical practices in the field of special education in the period from 2008 to 2020. The research was carried out in the databases of the Scientific Electronic Library Online (SciELO), Working Group 8 - Teacher Training and Working Group 15 - Special Education of the National Association of Graduate Studies and Research in Education (ANPED) and the Coordination for the Improvement of Higher Education Personnel (CAPES).

We emphasize that the present study is part of the research developed by researchers from the Federal University of Ouro Preto (UFOP), entitled "Extension actions and action-research in inclusion contexts: impacts on initial and continued teacher training in the region of Inconfidentes", funded by the Foundation for Research Support of Minas Gerais (FAPEMIG). In addition, this study is linked to the Center for Studies and Research on Practices in Literacy and Inclusion in Education (NEPPAI/CNPQ).

### **Pedagogical practices in the context of inclusion**

Pedagogical practice is understood here as a practice that is presented in the sense of praxis pervading cultures, subjectivities and subjects, in which the teacher is continuously reflective in relation to their actions (FRANCO, 2016). It is also understood that they are constituted from intentionalities that must be contemplated in the actions that will confer these intentionalities to all those involved in the educational process, leading students to liberating education (FRANCO, 2016). As stated by Lustosa and Melo (2018, p. 101), pedagogical practice can be:

[...]understood as a set of interactions, procedures, variables that intervene and interrelate in teaching situations: type of activities, methodologies,

material aspects of the situation, teacher's style, social relations, cultural content.

Pedagogical practice is not far from a political act, it is not considered neutral, precisely because there are intentionalities, as already emphasized by Franco (2016). Differing from this perspective, we realize that schools are structured around regulations, the school curriculum and all the bureaucracy that is rooted therein; it is noted that the structure of the regular education system is not consistent with the proposal of inclusive education (MANTOAN, 2003). Therefore, for school inclusion to happen, it is necessary that the teacher develops the ability to reflect on his practice, as well as his attitude towards the challenge of dealing with the other's difference, turning his gaze to the existing diversity, seeking greater understanding of the social, political, pedagogical contexts, among others, performing the interaction of practice with theory (FRANCO, 2015). In addition, it must be possible to work with a curriculum that often is not flexible for this teacher. So, there are no openings for him to develop another work, different from the one he has been doing for years on the school floor.

For this, it is necessary that the teacher is in constant training to place him/herself as a teacher of inclusive education. It is necessary that the teacher understands and values the differences that exist in the classroom; that he/she is clear about how the cognitive development of his/her students occurs; that he/she seeks ways to contemplate diversity through practices, techniques, and methods that provide an understanding of the intentions for "everyone and for each one", taking into account the specificities of the subjects; that he/she is aware of the issues that involve the inclusion process; that he/she understands the role of special education in inclusive education. In addition, he must be knowledgeable about the obstacles about the inclusion of the subject both in the educational and social fields (LUSTOSA; MELO, 2018).

There is a need for the teacher to break with merely technicist and mechanical practices, based on the transmission of knowledge, and develop as a reflective professional, analyzing the entire educational process in search of emancipatory education (FRANCO, 2016). One of the possibilities for the teacher to rethink his practice and particularly the object of this study, is closely linked to the research-action methodology, which can be exemplified as:

[...]direct support within the classroom, in which special education support services teachers and coordinators share teaching moments with common classroom teachers, observing, intervening, demonstrating and offering

support in the planning and regular monitoring of activities and in specific meetings for guidance and study (MATOS; MENDES, 2014, p. 48).

Despite this, teachers who work in regular education say they are unable to work with special education students, especially those with disabilities, directing the service of the PAEE to specialized teachers who work restrictively in the care of these students (MANTOAN, 2003). It is worth noting that the teaching practice is built little by little, and for it to be built with an eye toward diversity, it is necessary that the teacher reflects and pays attention to the need for attitudinal change, in order to contemplate all those involved in the educational act. Moreover, we realize the need to research and understand the practices together with "the practical teachers, and not about them" (FRANCO, 2012, p. 215), building knowledge and creating meaning collectively about the teaching and learning process.

### **Action - research: A tool to favor inclusive pedagogical practices**

The action research methodology can be defined in several ways, one of which is expressed by Thiollent (1986). For the author:

[...]action research is a type of empirically-based social research that is designed and conducted in close association with action or the resolution of a collective problem and in which researchers and participants representative of the situation or problem are involved in a cooperative or participatory manner (THIOLLENT, 1986, p. 14).

Some phases are necessary for the consolidation of the action - research methodology, such as: a) the exploratory phase which consists of understanding the field to be investigated, problems and possible solutions; b) definition of the research theme, with the purpose of indicating possible practical solutions and the area of knowledge to be dealt with; c) placement of the problems and the objectives to be achieved; d) theorizing about the theme; e) hypothesis raising; f) seminars, with the purpose of bringing together the subjects that make up the field of investigation in formative meetings; g) definition of the field of observation; h) data collection; i) learning linked to the investigation process; j) formal knowledge and informal knowledge, making the exchange between the researcher's knowledge and that of the interested parties; k) action plan; l) external disclosure of results. However, action research may or may not present itself in this sequence (THIOLLENT, 1986).

Since it is a practical methodology, action research has applicability in several areas of performance and knowledge, such as in the educational field, in social service, among others. Once researchers in the educational field make use of the action research methodology, "they

would be in a position to produce information and knowledge of effective use, including at the pedagogical level" (THIOLLENT, 1986, p. 75). This perspective can contribute to the elucidation of certain school problems, helping to define objectives, raise hypotheses, and search for the best pedagogical strategy, in a collective way, in order to solve the problems that emerge in the school context.

Educational action research has been presented as a methodology that contributes to the teaching and learning process, once teachers and researchers make use of their research to carry out a collective reflection on their actions and investigate possible necessary changes. According to Tripp (2005), the action research methodology is related to the various types of action research that refer to the improvement of the practice from reflection and action about the practice, that is, it is the search for the improvement of the practice through acting about the practice and the act of investigating about it. For Pletsch and Glat (2011, p. 3):

Action research is a method of scientific investigation, conceived and carried out in close association with an action aimed at solving a collective problem. Its main characteristic is the active participation of individuals belonging to the field where the project is being developed. It presupposes a broad interaction between subject and researcher, thus differentiating itself from conventional methods that (even with a qualitative focus) result in a distanced posture of the researcher in relation to the researched reality. Thus, not fulfilling its social responsibility before the community that served as a study space.

In this regard, action research may present itself as a possible methodological alternative, with the purpose of building meaning between theoretical knowledge and everyday actions. For this, it is necessary that there is a correlation between research and teaching practice in order to transform the educational practices present in the educational environment.

### **Methodological Procedures**

The systematic literature review is characterized by synthesis and analysis of relevant publications on a given subject, in order to understand what has been discussed about the theme. Moreover, according to Mancini and Sampaio (2006, p. 1),

[...]Systematic literature review and meta-analysis studies adopt a standardized methodology, with well-delineated and clearly defined search, selection, and analysis procedures, allowing the reader to appreciate the quality of the research and the validity of the conclusions made by the authors. Systematic reviews generally use scales or forms that define criteria

that guide the critical appraisal of the quality of the scientific evidence provided by the articles selected.

This study is characterized as a systematic literature review supported by a qualitative research approach, because it aims, as stated by Lüdke and André (1986, p. 1), "to promote the confrontation between the data, the evidence, the information collected on a particular subject and the accumulated theoretical knowledge about it". In addition, the literature review helps the researcher to substantiate the objectives and relevance of his or her research, as it identifies possible "gaps existing in previous research" (SANTOS, 2012, p. 94), emerging the possibilities and needs for new studies.

Given the relevance of this methodology, the authors Souza and Mendes (2017) conducted the study entitled "Systematic Review of Collaborative Research in Special Education from the Perspective of School Inclusion in Brazil," which dialogues with the objective of the present study. Although both present questions about what has been produced in relation to pedagogical practices for the target audience of special education, teacher training and action research, this study reveals data beyond the aforementioned work, contributing to a broader analysis, since the search took place in different databases.

## **Data collection**

The bibliographical survey was carried out in the SciELO, GT 8 - Teacher Training and GT 15 - Special Education of ANPEd and CAPES databases, between the years 2008 and 2020. The proposal to collect data starting in 2008 was due to the promulgation of the special education policy in that year. We used this date as a starting point, understanding that new pedagogical proposals, with connotations of inclusion, could emerge from then on. The search was carried out using the descriptors in pairs that are circumscribed in the field of Special Education and that involve action research methodology, namely: Inclusion and Action Research; Inclusion and Participant Research; Inclusion and Collaborative Research; Special Education and Action Research; Special Education and Participant Research; Special Education and Collaborative Research; Inclusive Education and Action Research; Inclusive Education and Participant Research; Inclusive Education and Collaborative Research.

The first database to be investigated was ANPED, as follows: access to database / topic scientific meetings / option "national" / selection of meetings held between 2008 and 2020 / in the option "Working Groups", access to WG8 - Teacher Education and WG 15 - Special Education / access to article by article and search by pairs of descriptors. It is

important to note that the 33rd ANPED meeting, held in 2010, is not available for consultation on the site. The second database was SciELO, carried out as follows: access to database / select Brazil option / then, Portuguese option / in the articles option select the articles search option / in the search option indicate the descriptor pairs / access article by article and search by descriptor pairs. The third search was conducted in CAPES journals and occurred as follows: access to database / select "journals" base / access to Federated Academic Community (CAFe) / select advanced search / search for pairs of descriptors / search refinement by article, education and years 2008 to 2020.

A total of 193 articles were retrieved, represented in Table 1, in a quantitative way.

**Tabela 1** – List of papers found by descriptors

Descriptors	ANPED	CAPES	SciELO
Inclusion and Action Research	3	58	7
Inclusion and Participant Research	0	12	0
Inclusion and Collaborative Research	1	13	6
Special Education and Action Research	3	34	9
Special Education and Participant Research	0	6	0
Special Education and Collaborative Research	1	15	0
Inclusive Education and Action Research	2	14	0
Inclusive Education and Participatory Research	0	3	0
Inclusive Education and Collaborative Research	1	5	0
<b>TOTAL</b>	<b>11</b>	<b>160</b>	<b>22</b>
<b>TOTAL OVERALL</b>			<b>193</b>

Source: Prepared by the authors

To systematize the data, we conducted an analysis of the articles found, seeking to identify their proximity to the object of research. The analysis protocol sought to contemplate the articles: that contain the descriptor pairs in the body of the text; that are related to inclusive pedagogical practices and/or the promotion of initial or continuing teacher education; that focus on the EAP; that involve the action research methodology.

Of the 193 articles found, 86 were repeated in the databases, which led to the analysis of 107 articles, of which 60 were excluded for not meeting the inclusion criteria and 3 for not having articles available for analysis. The 44 articles that were in accordance with the selection protocol were read and analytically systematized.



## **Results and discussions**

The articles found in the bibliographical survey, as shown in Table 1, indicate a concentration of a greater number of publications in the CAPES database, in addition to presenting search results with all nine pairs of descriptors. In the ANPED database, the search results are presented when six pairs of descriptors are used, and in SciELO, three pairs of descriptors are used. Furthermore, it can be seen that the number of articles found is higher when searching for the specific term action research in the three databases.

After characterizing the articles, they were classified according to the year of publication. Of the 44 papers, no publication was found from the years 2008 to 2010; two were published in 2011; two in 2012; one in 2013; one in 2014; three in 2015; twelve in 2016; three in 2017; ten in 2018; eight in 2019; and two in 2020. It is noted an increase of publications in the year 2016, after the enactment in 2015 of the Brazilian Law of Inclusion of the Person with Disability, no. 13.146/2015 (BRAZIL, 2015), evidencing the importance of public policies to foster debates in the theoretical field.

As for the denomination of the methodologies presented in the papers, nineteen are qualified as action research; six as collaborative research; six as collaborative-action research; six as collaborative-critical research; two as critical-collaborative research; one as systematic literature review; one as content analysis with comparative analysis; one as bibliographic study with participant research; one as ethnographic case study with participant research and one that makes use of historical-dialectical materialism, action research, case study and content analysis.

During the detailed reading of the articles found, a systematization by themes was carried out according to the objectives proposed by the study, reaching a total of 16 themes, as explained in Chart 1, accompanied by the titles. It was identified a larger number of articles with the themes "Inclusive education and teacher training" and "Teacher training and teaching practices", evidencing an approach of action research methodology with teacher training in the promotion of inclusive education.

**Chart 1** – Characterization and classification of the analyzed papers<sup>4</sup>

	<b>Topics</b>	<b>Title</b>
1	Inclusive education and teacher training	<ul style="list-style-type: none"> <li>- Educação Inclusiva e Cidadania: aproximações e contradições (Freitas, Neli Klix).</li> <li>- Formação e criatividade: elementos implicados na construção de uma escola inclusiva (Vieira, Francileide Batista de Almeida; Martins, Lúcia de Araújo Ramos).</li> <li>- <i>Collaborative action research at the training center for inclusive education and accessibility</i> - Pesquisa de ação colaborativa no treinamento: Centro de Educação Inclusiva e Acessibilidade (Silva, Gilberto Ferreira da; Nornberg, Marta; Scheffer, Natacha).</li> <li>- Formação dos professores para as modalidades educação especial e educação indígena: espaços intersticiais (Silva, João Henrique Da; Bruno, Marilda Moraes Garcia).</li> <li>- Formação de professores por meio de pesquisa colaborativa com vistas à inclusão de alunos com deficiência intelectual (Toledo, Elizabete Humai de; Vitaliano, Célia Regina).</li> <li>- O fazer pedagógico em contexto de inclusão: estratégias, ações e resultado (Franco, Marco Antonio Melo; Rodrigues, Paloma Roberta Euzebio).</li> <li>- Desenvolvimento do trabalho colaborativo entre uma professora de Educação Especial e professores da classe comum (Martinelli, Josemaris Aparecida; Vitalino, Célia Regina).</li> <li>- Formação de professores de Educação infantil para a inclusão de alunos com necessidades educacionais especiais: uma pesquisa colaborativa (Vitalino, Célia Regina).</li> </ul>
2	Teacher training Implementation of the Specialized Education Service (SES) policy	<ul style="list-style-type: none"> <li>- Sala de recursos no processo de inclusão do aluno com deficiência intelectual na percepção dos professores (Lopes, Esther; Marquezine, Maria Cristina).</li> <li>- Laboratório de Comunicações e Aprendizagens (Mascaro, Cristina Angélica de Aquino Carvalho; Pinheiro, Vanecessa Cabral da Silva).</li> <li>- Um olhar sobre a educação escolarizada de surdos à luz da competência em informação (Da Silva, Maria).</li> </ul>
3	Collaborative Actions	<ul style="list-style-type: none"> <li>- O funcionamento do Programa de Atendimento a Alunos com Altas Habilidades/Superdotação (PAAAH/SD-RJ) (Delou, Cristina Maria Carvalho).</li> <li>- Narrativas de professores e pedagogos sobre a deficiência: implicações no acesso ao currículo escolar (Vieira, Alexandro Braga; Ramos, Ines de Oliveira Ramos).</li> </ul>
4	Information and Communication Technology: Assistive Technology and pedagogical practices	<ul style="list-style-type: none"> <li>- Dosvox: rompendo barreiras da comunicação (Canejo, Elizabeth).</li> <li>- A avaliação da aprendizagem e o uso dos recursos de tecnologia assistiva em alunos com deficiências (Rosana Carla Do Nascimento Givigi; Juliana Nascimento de Alcântara; Raquel Souza Silva; Solano Sávio Figueiredo Dourado).</li> <li>- O trabalho colaborativo na escola: o uso da tecnologia assistiva (Givigi, Rosana Carla Do Nascimento; Silva, Raquel Souza; Alcântara, Juliana Nascimento de; Souza, Thais Alves de; Ralin, Vera Lucia Oliveira).</li> <li>- Audiovisual produzido por jovens surdos: um roteiro de inclusão e acessibilidade (Gutierrez, Ericler Oliveira).</li> </ul>

<sup>4</sup> Translator's note: We have chosen to keep the original title of the Brazilian Portuguese language research

5	Teacher training and pedagogical practices	<ul style="list-style-type: none"> <li>- Deficiência múltipla: formação de professores e processos de ensino-aprendizagem (Pletsch, Márcia Denise).</li> <li>- A formação de conceitos em alunos com deficiência intelectual: o caso de Ian (Braun, Patricia; Nunes, Leila Regina D'Oliveira de Paula).</li> <li>- Currículo escolar e deficiência: contribuições a partir da pesquisa-ação colaborativo-crítica (Magalhães, Rita de Cássia Barbosa Paiva; Soares, Marcia Torres Neri).</li> <li>- Pesquisa-ação e a formação do professor em serviço (Franco, Marco Antonio Melo).</li> <li>- Diálogos entre Boaventura de Souza Santos, Educação Especial e Currículo (Vieira, Alexandre Braga Vieira; Ramos, Ines de Oliveira).</li> <li>- A escuta visual: a educação de Surdos e a utilização de recursos visual imagético na prática pedagógica (Correia, Patrícia da Hora; Neves, Bárbara Coelho).</li> <li>- Consultoria colaborativa como estratégia de formação continuada para professores que atuam com estudantes com deficiência intelectual (Lago, Danúsia Cardoso; Tartuci, Dulcéria).</li> <li>- As contribuições de Meirieu para a formação continuada de professores e a adoção de práticas pedagógicas inclusivas (Vieira, Alexandre Braga; Jesus, Denise Meyrelles de; Lima, Jovenildo da Cruz; Mariano, Clayde Aparecida Belo da Silva).</li> </ul>
6	Inclusive education and pedagogical practices	<ul style="list-style-type: none"> <li>- Procedimentos favoráveis ao desenvolvimento de uma criança com Síndrome de Down numa classe comum (Campo, Kátia Patrício Benevides; Glat, Rosana).</li> <li>- Escola inclusiva: o desvelar de um espaço multifacetado (Tonini, Andréa Tonini; Costas, Fabiane AdelaTonetto).</li> <li>- Práticas e articulações pedagógicas na educação infantil: contribuições ao processo de desenvolvimento de uma criança com autismo (Marchiori, Alexandre Freitas; França, Carla de Almeida Aguiar).</li> <li>- O trabalho com gênero textual história em quadrinhos com alunos que possuem deficiência (Shimazaki, Elsa Midori; Auada Viviane Gislaïne Caetano; Menegassi, Renilson José; Mori, Nerli Nonato Ribeiro).</li> </ul>
7	Inclusive education and collaborative actions	<ul style="list-style-type: none"> <li>- O trabalho em colaboração para apoio da inclusão escolar: da teoria à prática docente (Vilaronga, Carla Ariela Rio; Mendes, Eniceia Gonçalves; Zerbato, Ana Paula).</li> <li>- A bidocência como uma proposta inclusiva (Pinheiro, Vanessa Cabral Da Silva; Mascaro, Cristina Angélica De Aquino Carvalho).</li> <li>- As contribuições da pesquisa-ação para a elaboração de políticas de formação continuada na perspectiva da inclusão escolar (Almeida, Mariangela Lima de; Bneto, Maria José Carvalho; Silva, Nazareth Vidal da).</li> <li>- A mudança do gestor em pesquisador no processo de pesquisa-ação colaborativo-crítica: a Educação Especial em uma rede de ensino (Bento, Maria José Carvalho; Silva, Nazareth Vidal da).</li> </ul>
8	Vocational education	<ul style="list-style-type: none"> <li>- Deficiência intelectual e educação profissional (Mascaro, Cristina Angélica De Aquino Carvalho).</li> </ul>
9	Systematic literature review	<ul style="list-style-type: none"> <li>- Revisão sistemática das pesquisas colaborativas em educação especial na perspectiva da inclusão escolar no Brasil (Souza, ChristianneThatiana Ramos de; Mendes, Eniceia Gonçalves).</li> </ul>
10	Special Education in specialized schools	<ul style="list-style-type: none"> <li>- Educação Especial de Jovens e Adultos: um olhar para o Atendimento Educacional em escolas especializadas (Oliveira, Ivanilde Apoluceno de; Santos Tânia Regina Lobato dos).</li> <li>- Plano Educacional Individualizado: uma estratégia de inclusão e aprendizagem nas aulas de Educação Física (Fontana, EvellineCristhine; Cruz, Gilmar de Carvalho; Paula, Luana Aparecida de).</li> </ul>
11	Pedagogical innovation and diversity: accessible teaching and learning strategies	<ul style="list-style-type: none"> <li>- Fundamentos de neurociência presentes na inclusão escolar: vivências docentes (Silva, Luciane Grecilo da; Mello, Elena Maria Billig).</li> </ul>
12	Teachers' perceptions of the challenges of	<ul style="list-style-type: none"> <li>- O transtorno do espectro autista em tempos de inclusão escolar: o foco nos profissionais de educação (Barbosa, Marily Oliveira).</li> </ul>

	schooling the PAEE	
13	Brazilian Sign Language (LIBRAS)	- O Ensino de Libras, em uma escola no município de Areia-PB, por meio de extensão universitária (Dexenberger, Ana Cristina Silva; Silva, Bruno Ferreira da). - A proposta Bilingue na educação de surdos: práticas pedagógicas no processo de alfabetização no município de Colorado do Oeste/Rondônia (Moret, Márcia Cristina Florêncio Fernandes; Mendonça, João Guilherme Rodrigues).
14	Art and Education	- Arte e Educação Especial: narrativas e criações artísticas (Beltrami, Flávia Gurniski; Mori, Nerli Nonato Ribeiro).
15	Learning Assessment	- Construção mediada e colaborativa de instrumentos de avaliação da aprendizagem na escola inclusiva (Mello, Alessandra de Fatima Giacomet; Hostins, Regina Célia Linhares).
16	Education Policy	- A produção de conhecimentos sobre Atendimento Educacional Especializado: um estudo comparado nacional (Almeida, Mariangela Lima; Milanesi, Josiane Beltrame; Mendes, Enicéia).

Source: Prepared by the authors

The following research participants were identified in the studies: teachers of the regular education system; family members of the students; researchers; pedagogical supervisor; pedagogical coordinator; students with and without disabilities; students with intellectual disabilities; school principal; vice-principal; school supervisor; teacher of the multipurpose resource room (MRR); teacher of the specialized educational service (SES); students with High Abilities and Giftedness; students with severe disabilities; Study Group in Language and Communication; student with Multiple Disabilities; master's degree students; scientific initiation scholarship students; student with Cerebral Palsy; libras interpreter; students with Down Syndrome; blind students; blind researcher; students with autistic spectrum disorders - ASD; all school employees; Special Education teacher; professionals from the Center for Inclusive Education and Accessibility (CIEA); students with intellectual disabilities and Youth and Adult Education (YAE) technicians; Special Education managers; Municipal Secretaries of Education; Regional Superintendents; Pedagogy interns; social worker; teachers and university students; Physical Education teacher; special education school support professionals, and deaf students. Thus, we note that there is a heterogeneity of participants in research, which reflects characteristics inherent in action research, which presupposes the involvement and participation of the subjects of the field investigated.

With regard to the instruments and techniques used for data collection, the following were presented: meetings, semi-structured interviews, interviews, educational pair, pilot study, study groups, intervention plans, participant observation, observation, group assessment, writing, recording, filming, open report, psychological assessment, case study, study acceleration guidelines, tests, planning, document analysis, training meetings, data triangulation, technology courses, writing script, questionnaire application, bibliographic

survey, quantitative data survey, digital itinerancy diary, reflective sessions, audiovisual course, written script, and storyboard, spaces-time for training, Provinha Brasil, action plan, artistic creation, oral narratives, study cycles, direct participation of the researcher in the classroom, report, study cycles on theoretical and methodological content, collaborative lesson planning, conversation circle, Leuven Involvement Scale, comparative analysis, game dramatization, tokens, critical reflection, collaborative actions, focus group, field diary, Modular Object-Oriented Dynamic Learning Environment, dance, individualized educational plan, comics, reflective groups, voice recorder, stave logs, reports, and transcripts.

The articles studied here presented as objectives: to analyze, describe, intervene, investigate, understand, understand, present and show, promote, discuss, problematize, promote continuing education, elaborate and apply, report, reflect, and analyze or build propositional actions about a certain theme. These objectives were set with the intention of:

- Build action strategies with educators, students and families, enabling the gradual but successful implementation of the inclusive education project;

- Analyze the perceptions of teachers and investigate training programs for these professionals about inclusive education and the importance of the MRR and SES in the process of inclusion of students with intellectual disabilities in regular education;

- Investigate how the methodology of action research can contribute to the process of continuing education of teachers, for creative practices, improvement of teaching practices, aiming at the effectiveness of inclusive education, in addition to addressing strategies for improving the inclusive educational work;

- Analyze and perform interventions in the classroom and in the recreation environment in the school setting, in order to provide better pedagogical practices with the use of assistive technology resources with students with disabilities, enabling the inclusive curriculum and the access to new assessment criteria and instruments

- Analyze the school curriculum regarding the inclusive education of the person with disabilities;

- To present the use of the information and communication technology (ICT) tool, such as DOSVOX, in order to promote the educational improvement of blind students, besides providing teachers and students with access to a previously unknown ICT tool, with the purpose of ensuring the communication between both and the teaching and learning process of students;

- Describe the improvement of the SES in view of the Brazilian School Inclusion Policy, for the Implementation of Communication and Learning Laboratory Training;
- Analyze the advantages of co-teaching in the promotion of school inclusion of students targeted for Special Education (PAEE);
- Analyze the co-teaching between Special Education and Elementary School teachers in the promotion of school inclusion of students with intellectual disabilities;
- To describe and analyze the productions about collaborative action research developed in the area of Special Education in the perspective of school inclusion in the Brazilian Digital Library of Theses and Dissertations (BDBTD in the Portuguese acronym);
- To investigate Neuroscience as a support in accessible teaching and learning strategies in view of pedagogical innovation and diversity in regular classes;
- To analyze how education and communication relate to the educational process of the deaf;
- Understand the conception of teaching LIBRAS by hearing students, evaluating the degree of knowledge and identifying the importance of teaching LIBRAS in the schooling process and analyze and verify the teacher's perception about the teaching of LIBRAS in the daily lives of students;
- Understand the approach of Special Education with the productions of Boaventura de Souza Santos in view of the educational inclusion of the PAEE
- Analyze the advances and setbacks from the intervention of the teacher of AEE and LIBRAS interpreter in the deaf literacy process in the bilingual perspective;
- Investigate the development of narratives and artistic creations based on art from the educational intervention with students with special needs;
- Discuss the gaps in teaching practice related to the evaluation of the schooling process of the PAEE;
- Analyze the place that visual representations occupy in the pedagogical practices of teachers focused on bilingual education of deaf students;
- Problematize the view of teachers about the students with special needs in regular school;
- Analyze the continuing education of teachers who work with students with intellectual disabilities using Collaborative Consultancy as a pedagogical strategy;

- Understand different collaborative pedagogical practices in the inclusive perspective developed in order to enhance the possibilities of development of students with autism;
- Promote continuing education based on inclusive pedagogical practices aimed at the PAEE;
- Develop from the action-research methodology a political project of continuing education for professionals focused on school inclusion;
- Develop and apply the Individualized Education Plan as a strategy for inclusion and learning;
- Develop strategies for the appropriation of scientific concepts present in comics by people with intellectual disabilities;
- Analyze the contributions of critical-collaborative action research in the formulation, by managers of an education network, of a normative document on Special Education.

It is noticeable that it is recurrent in research the perspective of investigating pedagogical strategies that can enable the inclusion of students with disabilities in dialogue with teacher training. Moreover, these studies seek to analyze the educational curricula in order to observe if the special education policies are being implemented in the perspective of inclusive education and what are the actions of the educational body to achieve this goal.

The final considerations of the analyzed studies presented issues on the following topics: a) teacher training; b) teaching and learning process; c) inclusive education; d) difficulties faced for the school inclusion of the ESAP; e) considerations about the methodology used; f) learning evaluation.

Regarding teacher training, the studies show: a) that the initial and continuing education of teachers is a fundamental point for special education in the perspective of inclusive education; b) the teacher must have initial training that results in critical, reflective teachers, able to work with the differences present in the classroom; c) the training of teachers for SES contributes to the learning process of students, however, for a more effective learning process would require a support network such as occupational therapy, physiotherapy, etc.. d) the *bidocência* or co-teaching as an alternative to support school inclusion, favoring new knowledge and continuing education; e) new continuing education policies for diversity should be proposed and rethought; f) the need for teachers to have a theoretical deepening about what they want to investigate and that continuing education is constant; g) during continuing education it is possible to build movements of interactions/interrelationships among teachers to improve the schooling of the PAEE; h) the in-service training of the

specialist teacher aiming at the collaborative work with the common education teacher contributes to the educational inclusion of all students with or without disabilities; i) the training based on Collaborative Consultancy contributes to the process of inclusion of the PAEE; j) it is important to invest in educability and in the conception of the school as a place for everyone, breaking with the belief that the PAEE students are uneducable.

Regarding the teaching and learning process, the following considerations are presented: a) the special education teacher should not be distinguished from the regular education teacher; b) the use of ICT in promoting student accessibility, providing better teaching, learning and assessment process for students with disabilities, besides increasing technological repertoire of all participants; c) the use of assistive technologies favors the access of students with disabilities to the curriculum; d) co-teaching as an alternative to support inclusion; e) the dialog between specialized schools in the educational service for PAEE and regular education schools provides great results and exchange of experiences; f) the understanding of the teacher about the child's diagnosis and the creation of teaching strategies based on this understanding favors the process of teaching and learning; g) the transformation of the socio-educational context, from the reflection on the practices and discussion in the collective about possible interventions, constituting the basis of collaborative research, contributes to the process of teaching and learning of students; h) teachers should provide methodological and pedagogical subsidies so that students have better conditions for the construction of knowledge; i) MRR should be a support and not considered a room for reinforcement or repetition of content; j) the teaching of art contributes to the process of humanization of the students; k) it is important to relate the teaching to the social, historical and cultural reality of the learner, enabling during the teaching and learning process to interpret reality and transform the theoretical and practical experiences; l) the use of visual image allied to bilingualism enhances the learning process of the deaf; m) need to think about facilitating resources for deaf learning; n) it is the school's duty to create internal mechanisms that enable the performance of teachers; o) recognize the potential of student development is necessary for the promotion of school inclusion; p) the collective development of the Individualized Development Plan corroborates the learning process and inclusion; q) the theoretical and practical support for the realization of pedagogical mediations favor the learning and inclusion of PAEE students.

The conclusions of the analyzed texts present some reflections about inclusive education as follows: a) inclusive practices are innovative practices; b) the school community



must live with differences to achieve inclusive education; c) social interaction as the greatest good to be cultivated in schools to achieve school inclusion; d) dealing with differences and inclusion in the school context does not end only in curricular or organizational adjustments, but also in a practice in praxis in order to make students critical beings and protagonists of their own learning; e) the need to rethink the school curriculum that provides inclusive practices; f) the inclusion process must leave the academic theoretical field, research must occur in the daily routine of the classroom, along with researchers and stakeholders in the process; g) in addition to educational policies in the inclusive perspective, there is the need for actions that accompany and provide the necessary training to education professionals in their practices with the PAEE.

Some difficulties faced by the school inclusion of the PAEE are pointed out in the conclusions, as follows: a) educators put as a difficulty the construction of a pedagogy of difference; b) the solitary work of the teacher in the classroom becomes difficult, because at certain times some students demand individualized care; c) there is a difficulty of researchers in entering the school environment to act and intervene; d) traditional teaching and little knowledge about the methodology and theory used of the educational process; e) lack of planning with flexible and adapted strategies and resources aimed at access to the curriculum; f) few extension projects focused on LIBRAS aimed at overcoming the exclusion of the deaf person; g) the teaching viewpoint guided by the principles of normality contributes to exclusion and failure in the process of teaching and learning of the PEE.

About the evaluation of the methodologies presented in the articles, some considerations are raised, such as: a) collaborative research is an important methodology for teacher training from the dialogue with researchers and stakeholders in search of a common good, favoring the process of inclusive education; b) the methodology of action research as a means of favoring the inclusion of students with or without disabilities, in addition to favoring the continuing education of the teacher in view of inclusive educational practices, in which the actions to be taken will be constituted during the process and collectively; c) collaborative research as a means of implementing inclusive education and special education policies; d) studies that present the methodology of collaborative research in school inclusion seek the improvement of care to the PAEE; e) action research enables the construction of educational policies in a collaborative way in partnership with the various public managers of special education.

The learning assessment appears in a conclusion with the following reflections: a) there is a lack of research on the mediated and collaborative construction of learning assessment tools for the SENAP; b) the systematic learning assessment tool, called Collaborative Care Plan aimed at the SENAP, contributes to the school inclusion process; c) the collaborative work between specialist teacher and common education teacher is effective in improving the learning assessment of the SENAP.

We note that there is a discussion about the possible attitudes that should be taken for the effectiveness of inclusive education and the challenges to be faced. According to Mantoan (2003, p. 14), if what we seek is an inclusive education "it is urgent that its plans are redefined for an education focused on global citizenship, full, free of prejudice and that recognizes and values differences. For this, it is necessary that institutions undergo teaching reforms and have an investment for education aimed at conscious inclusion.

In addition, it is important that teaching practice dialogues with reflection and research, i.e., it is necessary to consider the "capacity of research to promote dialogue, reflection among teachers, to open interactive spaces for critical coexistence, beyond routine and bureaucratically organized spaces" (FRANCO, 2012, p. 179). In this sense, action research in education presents itself as a strategy for teachers and researchers to use their research to improve their practice, reflecting on their students' learning. However, according to Franco (2019, p. 359), some researchers fail to follow epistemological principles of action research and end up distorting the meaning of this methodology, "becoming only a researched pedagogical action".

In a school with rigid schedules, watertight disciplines, and little possibility of student circulation outside the classroom, it is impossible to do action research, even if only pedagogically. However, the teachings of action research may favor a pedagogically more structured, more adequate, more dialogical and more participatory classroom (FRANCO, 2019, p. 368).

In this perspective, the theories and methods need in-depth studies in order not to have a naive understanding of them. There is a need for a deepening of the epistemological concepts that permeate Pedagogy by those who discuss school knowledge. That is, the Pedagogy understood as an articulating matrix between the different disciplinary contributions that focus on education (PIMENTA; FRANCO; FUSARI, 2016, p. 2).

We realize that the traditional matrix education, present on the school floor, brings certain issues, such as fragmentation and compartmentalization of knowledge in the curricular matrices of educational institutions, lack of link between theory and practice based on

educational praxis, which end up reproducing mechanistic and technicist practices, emptied of reflection. In addition to these points, we observe the need for continued education of teachers in search of the transformation of teaching practice. In this way, the use of action research methodology in the educational field has been presented as effective for breaking away from the positivist idea, with the purpose of promoting collective knowledge, involving teachers, students, specialists, and other external players, studying the reality experienced in school spaces. In view of this, the knowledge produced is contextualized, carrying out the reflection-action-reflection about theory and practice respectively, and the research-action methodology can contribute in several aspects, such as initial and continuing teacher training (FRANCO, 2005).

### **Final remarks**

We note the numerous challenges faced by all who participate in the school community to provide inclusive education, since they encounter many difficulties in dealing with the differences of students. It is also clear that despite the progress made in policies that ensure access and permanence of the target audience of special education, much remains to be done to effectively achieve the educational paradigm of inclusion. There is a need to expand the debate on inclusion in the field of public policies, educational practices, and external aspects that enable the promotion of inclusion.

Although there are still few publications on the theme presented here, we note that there was an increase in research conducted after the establishment, in 2015, of the Brazilian Law of Inclusion of People with Disabilities (BRAZIL, 2015), which may be an indication of the need for discussion in the field of public policy, in order to foster practical and theoretical discussion on the subject.

In addition, we note that the articles analyzed here present in general the methodology of action research as a means of providing reflection and discussion between teachers and researchers, dialogue between specialist teachers and common room teachers, involvement of the whole school community, in view of the educational transformation proposed by inclusive education.

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