

## TEACHERS' PERCEPTIONS IN THE IDENTIFICATION OF STUDENTS WITH GIFTED BEHAVIOR: AN INTEGRATIVE REVIEW



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### ABSTRACT

This study proposes to carry out an integrative literature review with the objective of analyzing how the teacher's perception influences the process of identification of students with gifted behavior. The search for articles was carried out in the PUBMED, SCOPUS, ERIC, LILACS and EDUBASE databases, correlating the search terms Gifted, Talented, Child, Adolescent, Student, School, Education, Perception, Identification, Characteristics, Screening, Teacher and free synonymous terms, with the objective of finding scientific evidence to answer the research question proposed in the present study. No date, language, and/or study design filters were applied. The results showed that the perceptions of teachers in the identification of students with gifted behavior are biased by a deficient initial or continuing education that corroborates mistaken sociocultural representations, rooted in myths and stereotypes that bring implications and prejudices in the process of identification and inclusion of these subjects.

**Keywords:** High abilities or giftedness, Teacher, Initial and continuing education, Perceptions.

## INTRODUCTION

Brazilian education comprises modalities and levels well defined in current legislation and documents. The reflections and discussions in the project will deal with the modality of Special Education in the inclusive perspective, which encompasses as its target audience students with disabilities, Autism Spectrum Disorder (ASD) and High abilities or Giftedness, and institutes the Specialized Educational Service (AEE) as its main support service (BRASIL, 2015).

Considering Special Education from an inclusive perspective, the school should be thought of as a space for the reception of human, cultural and social diversity, with an offer of emancipatory education, enabling the development of the autonomy of individuals, as well as their potentialities.

In the materialization of an education with equity, equal opportunities, which embraces diversity and effectively includes everyone, combating inequalities becomes urgent and challenging. Thus, the school needs to be a welcoming space of which everyone is a part, being able to meet the specificities of all students with humanity, commitment and efficiency:

Inclusion is necessary, primarily to improve the conditions of the school, so that generations can be formed that are more prepared to live life to the fullest, freely, without prejudice, without barriers. We cannot compromise solutions, even if the price we have to pay is very high, because it will never be as high as the rescue of a marginalized school life, a dropout, a child stigmatized for no reason (MANTOAN, 2003, p. 30).

In view of this perspective, in the educational sphere, it is necessary to promote pedagogical strategies that oppose inequalities, not only in relation to people with disabilities and Autism Spectrum Disorder, but also to students with High Abilities or Giftedness (AHSD), lost in an anonymous crowd, neglected and made invisible in general.

Based on Renzulli's (2004) Three Rings of Giftedness Theory, individuals with AHSD are those who, in their behaviors, present the following traits: above-average general or specific abilities, high levels of commitment to the task and creativity, in addition to the interference of the environment and personality factors. And it conceptualizes two types of giftedness: the academic one, which is measured by intelligence tests and stands out in school tasks; and the creative-productive one, related to original ideas, innovation, unusual and divergent thinking, and less identified in the school environment.

In addition to the concept and characteristics of students with high abilities or giftedness, it is essential that teachers have an attentive and thorough look and promote pedagogical practices that stimulate academic and creative-productive development.

According to the World Health Organization (WHO), it is estimated that between 3.5% and 5% of the population is academically gifted. And that, taking into account the creative-productive generation, the estimate increases between 15% and 20% of the population. The School Census (National Institute of Educational Studies and Research Anísio Teixeira, 2022) indicated that in Brazilian Basic Education in 2022, there were 26,815 students with high abilities or giftedness. This number represents 0.06% of the total number of students enrolled, which indicates that in Brazil there are difficulties in identifying students.

Farias and Wechsler (2014) reinforce the difficulty in Brazil in relation to identification:

Therefore, it is observed that it is difficult to identify talents in the Brazilian reality, as teachers are faced with immense educational failures. Both in public and private schools, teachers sometimes feel disoriented, they do not know how to attend and help develop the specific capacities of each student. Abandoned in the classrooms, without support or guidance consistent with their needs, these students may follow non-virtuous, problematic paths, which can also cause learning difficulties and/or behavioral problems ( FARIAS; WECHSLER, 2014, p. 335).

According to the **Marland Report (1972)**, it is estimated that 3% to 5% of the population has HA/DS, however, it is verified that these students remain invisible in schools. The identification of the student with gifted behavior will depend on the teacher's previous knowledge in understanding their characteristics in order to provide pedagogical tools and strategies that boost potential and interest in learning (Piske et al., 2016). One of the barriers that hinder the identification of gifted students, according to Bahia and Rosseti (2014) would be the deficient initial and/or continuing education, in addition to the sociocultural conceptions of teachers rooted in myths about giftedness.

Based on the demand pointed out, the present article aimed to analyze how the teacher's perception interferes in the identification of students with gifted behavior.

## METHOD

The integrative literature review consists of a descriptive study that seeks to synthesize information, based on a specific theme, enabling the understanding of the phenomenon studied (D'Avila et al, 2017). The following steps of the review include: (1)

elaboration of the research question; (2) choice of data sources; (3) definition of keywords for the search; (4) search in databases; (5) selection of articles; (6) data extraction; (7) synthesis of data; (8) analysis and interpretation of data (Hohendorff, 2014). To carry out the review, the guiding question was: How is the teachers' perception related to the identification of students with characteristics of high abilities or giftedness?

The databases chosen for the literature review that took place in January 2023 were: PUBMED, SCOPUS, ERIC, LILACS, and EDUBASE, correlating the search terms *Gifted, Talented, Child, Adolescent, Student, School, Education, Perception, Identification, Characteristics, Screening, Teacher, and free synonymous terms, with the aim of finding scientific evidence to answer the research question proposed in the present study. To identify the search terms*, the controlled vocabularies of the health area DeCs (Health Sciences Descriptors) and MeSH (*Medical Subject Headings*) were consulted. No date, language, and/or study design filters were applied. The process of elaboration of the search strategies met the recommendations of the *Peer Review of Electronic Search Strategies* (PRESS).

After searching the databases, 265 records were identified and exported to the *End Note Web* reference manager. 40 duplicates were removed, totaling 225 records.

## ELIGIBILITY CRITERIA

The following inclusion criteria were used: studies in relation to the perception of teachers in the identification of gifted behavior; cover early childhood education and elementary education; be scientific articles reporting empirical research, published in the period from 2015 to 2022. The exclusion criteria were: studies that involved the perception of the family and the students; articles in which the samples involved the perception of teachers in relation to children with double exceptionality; literature reviews.

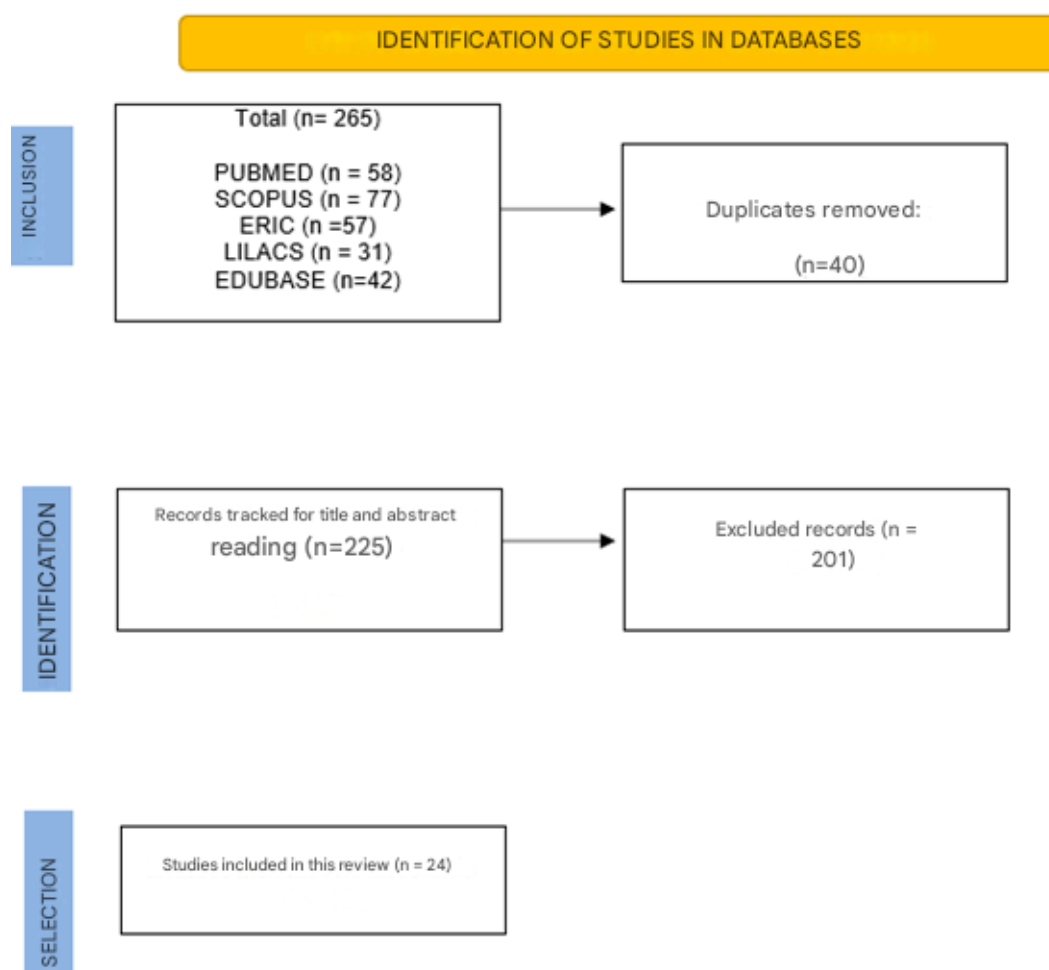
## RESULTS AND DISCUSSIONS

The present integrative literature review detected 225 articles related to teachers' perception of the identification of students with gifted behavior. Considering the defined eligibility criteria, 24 articles were selected.

## SEARCH STRATEGY AND SELECTION OF STUDIES

	ESTRATÉGIAS DE BUSCA	N
PUBMED	((Gifted*[ti] OR Talented*[ti]) AND (Child[m] OR Adolescent[m] OR Child*[tiab] OR Adolescent*[tiab] OR Student*[tiab] OR School*[tiab])) AND (Education[ti] OR Pedagog*[ti] OR Perception*[ti] OR Characteristic*[ti] OR Identification[ti] OR Teacher*[ti] OR Screening[ti])	58
SCOPUS	TITLE (Gifted*ORTalented) AND TITLE (Child*OR Adolescent*OR Student*OR School*) AND TITLE (Identification OR Perception*OR Characteristic*OR Screening) AND TITLE (Teacher*)	77
ERIC	(Gifted*ORTalented) AND title:(Child*ORA dolescent*OR Adolescent*OR Student*OR School*) AND title:(Identification OR Perception*OR Characteristic*OR Screening) AND title:(Teacher*)	57
LILACS	(Gifted*ORTalented OR "Altas Habilidades" OR Superdotação* OR Talentoso) AND (Child* OR Adolescen* OR Student* OR School* OR Criança* OR Estudante* OR Aluno* OR Escola* OR Nino*OR Alumno*OR Estudante*OR Escuela*) AND (Identification OR Perception*OR Characteristic*OR Screening OR Identificação OR Percepção* OR Característica* OR Monitoramento OR Mapeamento OR Identificación OR Percepción*OR Monitoreo) AND (Teacher*OR Professor*OR Profesor*OR Maestria*) AND (db:("LILACS"))	31
EDUBASE*	Superdotados OR superdotação OR "altas habilidades" OR "altas competencias"	42

In the selection stage, of the 265 articles, duplicate references were excluded. Initially, the selection was made by reading the titles and abstracts, according to the eligibility criteria. Once the new eligibility check was concluded, from the reading of the full article, 24 eligible articles remained, according to the following Prisma Flowchart:



The data related to the reference of the selected articles, the participants of the studies, the theme discussed and the countries are presented in Chart 1. It is worth mentioning that in the search in the databases, 265 records were selected, 40 of which were removed. Based on the eligibility criteria, 201 articles were excluded.

**Table 1 - List of selected articles**

Study No.	Authors (year)	Participants	Thematic	Country
1	Allen, J.K.(2017)	06 teachers with at least five years of teaching experience	The role that teachers' perceptions play in the underrepresentation of culturally and linguistically diverse students in gifted programming.	USA (Georgia)
2	Ant, M.(2022)	281 teachers in the quantitative collection, only 12 also participated in the qualitative component	How teachers' perceptions of their students affect how they provide opportunities and support for learning.	Lebanon

3	Arantes-Breno, D.R.B.; Capellini, V.L.M.F. (2022)	1 resource room teacher for high abilities or giftedness	Effects of a continuing education program, through collaborative consulting, evaluating perceptions, beliefs and myths before and after the intervention.	Brazil
4	Barrera, A.G.; López, C.M.; Hernández, P.G. (2021)	637 teachers	Analysis of the relationship between teacher training and teachers' perception of the identification and care of gifted students.	Spain
5	Cannaday, J.; Courduff, J. (2017)	93 teachers	Teachers' Perception of Certification Practices in Gifted and Talented Education (GATE)	USA (California)
6	Cheung, A.C.K.; Shek, D.T.L.; Hui, A.N.N.; Leung, K.H.; Cheung, R.S.H. (2022)	2031 teachers	Teachers' perception from the intervention of the Education Program for the Gifted (GIFT), with emphasis on the observation of changes in conception, competencies and pedagogical practices.	China
7	De Angelis, B. (2017)	35 teachers and 70 undergraduates of the teacher training course	The way knowledge about gifted education is diffused in a population of teachers and teacher training graduates.	Italy
8	Demirok, M.; Ozcan, D. (2016)	175 teachers	Development of the Teacher's Perception Scale on Gifted Students.	Croatia
9	Ferreira, J.A.O.; Carneiro, R.U.C. (2020)	2 teachers, in addition to the pedagogical coordinator and the school principal	Analysis of the process of inclusion of students with high abilities or giftedness in elementary school, based on teacher training, infrastructure and organization of the school space.	Brazil
10	Freitas, M.F.R.L.; Schelini, P.W.; Pérez, E. R. (2017)	16 teachers	Analysis of accuracy and validity evidence based on the internal structure of the Talent and Talent Identification Scale (EIDT).	Brazil
11	García-Barrera, A.; De la Flor, P. (2016)	637 teachers	Teachers' perception in the identification of gifted students	Spain
12	Jawabreh, R.; Danju, I.; Salha, S. (2022)	450 teachers	Investigation of the characteristics of gifted children through the perception of early childhood education teachers.	Palestine
13	Judson, A.; Rawlinson, C.; Meyer, F. (2019)	6 teachers	Discussion of teachers' ability to identify giftedness in various domains.	New Zealand



14	Matheis, S.; Keller, L.K.; Kronborg, L.; Schmitt, M.; Prechel, F. (2020)	315 teachers	Influence of stereotypes on teachers' perception and behavior towards gifted students, as well as their pedagogical practices.	Australia
15	Matric, M.; Duh, M. (2019)	Arts teachers	Importance of the role of the teacher who identifies gifted students in the artistic area, as well as their pedagogical practices	Slovenia
16	Mohamed, A.; Elhoweris, H. (2022)	16 teachers	Perception of early childhood education teachers about various components of the education of gifted children.	United Arab Emirates
17	Morales-Nava, R.A.; González-Arreda, M.R.; Chavez-Soto, B.I. (2021)	58 teachers	Teachers' knowledge about the characteristics identified in boys and girls with high abilities or giftedness.	Colombia
18	Rech, A.J.D.; Negrini, T. (2019)	12 teachers	Problematization of teacher training to work in inclusive education, with a focus on students with high ability or giftedness.	Brazil
19	Reis-Jorge, J.; Ferreira, M.; Olcina-Sempere, G.; Marques, B. (2021)	13 teachers	Perception of elementary school teachers about giftedness and their experiences of working with these students in their regular classes.	Portugal
20	Slater, E.; Howitt, C. (2018)	13 teachers	Teachers' perception of the benefits and limitations associated with multiple assessment instruments to identify gifted 6- and 7-year-old children.	Australia
21	Sousa, R.A.R.; Fleith, D. S. (2021)	6 teachers	Perception of teachers of Specialized Educational Service to students with high abilities or giftedness about the emotional development of their students.	Brazil
22	Souto, K. C.; Castro, H.C.; Delou, C.M.C. (2021)	56 teachers and undergraduates	Perception of high abilities or giftedness in the area of exact and earth sciences.	Brazil
23	Weyns, T.; Preckel, F.; Verschueren, K. (2021)	522 teachers	Perception of teachers in training about the characteristics of gifted children and their teacher-student interactions, in addition to the investigation of the influence of teachers' stereotypes in relation to this public.	Belgium
24	Printer, D.; Akman, B.; MercanUzun, E.; Brother, S. (2017)	163 teachers	View of early childhood education teachers on gifted children.	Turkey

Source: Prepared by the authors, 2023.



The articles were grouped into categories, taking into account the similarities between the objectives and the results achieved in the findings on the perception of teachers in the identification of gifted students: teacher education; Stereotypes; scales of perception/characteristics; inclusion and evaluation process.

**Chart 2 - Category: Teacher Training**

Article	Results
3	Teacher Training Program with theoretical and practical aspects: pre and post intervention; Misconceptions on the subject
4	Need to improve training on this topic in initial and continuing teacher training
5	Teacher training based on GATE certification (training)
6	GIFT program for students and teachers with pre and post test (professional development). Based on the knowledge, attitudes, teaching behavior, characteristics and competencies of teachers, promoting knowledge about gifted education and specific teaching strategies
9	Difficulties in the inclusion process related to various aspects such as the training of teachers and the entire school team, infrastructure, and organization of classrooms
16	Promotion of assessment tools and enrichment programs that can train special education teachers to serve gifted students
17	Importance of recognizing the characteristics of children in the detection of giftedness; there is a priority for detection in elementary education and not in early childhood education; provide teacher training that enables the development of skills in the identification of gifted children
18	Initial and/or continuing education was fragile, as teachers did not feel equipped to plan inclusive pedagogical practices that would serve gifted students
19	Teachers represented giftedness with an emphasis on the intellectual traits of gifted students and adjusted their pedagogical approach according to specificities; evaluation practices focused primarily on product-oriented approaches rather than process-oriented approaches; Essential teacher training to adapt teaching to the needs and characteristics of gifted students
22	Knowledge about high abilities/giftedness was superficial and that the teaching practice, as well as subsequent training, has not brought the adequate perception of giftedness

Source: Prepared by the authors, 2023.

**Chart 3 - Category: Stereotypes**

Article	Results
1	Language barrier and overemphasis on standardized testing contribute to underrepresentation of gifted learners
2	Economic context; choices made regarding the provision of education for the gifted in classrooms
11	Myths and limited knowledge about gifted students hinder correct detection and specialized educational care
13	Social and intellectual origin of the students; Need to use contemporary physics to identify underprivileged gifted people
14	Discrepancies between the actual characteristics of gifted female and male students; stereotypes in teachers' beliefs; Consequences of stereotypes and implications for teacher training
15	Stereotypical attitudes teachers have towards specific groups of students: teachers used positive terms mainly to describe gifted and artistically gifted students and negative ones to describe students with double exceptionality
21	Significant differences between gifted and non-gifted students in patterns of intellectual and imaginative overexcitability, as well as a tendency of teachers to emotionally characterize gifted students with an emphasis on psychological disorders and frailties

23	Teachers exhibited negative views of the personality and socio-emotional functioning of gifted children and the quality of the teacher-student relationship; Stereotyping
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Source: Prepared by the authors, 2023.

**Table 4 - Category: Scales of Perceptions/Characteristics**

Article	Results
8	The Teacher Perception Scale on Gifted Students showed a high level of validity and reliability. The need for teachers to be able to identify talented students and to be more prepared in relation to perception and identification was evidenced
10	Based on the application of the Talent and Talent Identification Scale (EIDT), it was considered that the training with teachers was previously inefficient for its use. The evaluation made by the teachers when filling out the scale was shallow and biased by the participants' preconceptions
12	As a result of the use of the Scale for the Assessment of the Behavioral Characteristics of Gifted and Talented Students, there was a significant difference in teachers' perceptions according to their academic qualification, and whether or not children need a specific curriculum in Early Childhood Education. The importance of the teacher in identifying and highlighting the characteristics of gifted children is essential
24	Scale for the Evaluation of Behavioral Characteristics of Gifted and Talented Students: from the scale, it was observed that teachers associate giftedness with cognitive characteristics in general, disregarding their social, emotional, motor development, language comprehension and expression, creativity, artistic skills, sports, leadership skills

Source: Prepared by the authors, 2023.

**Table 5 - Category: Inclusion and Evaluation Process**

Article	Results
7	Gifted education has been largely excluded from special and inclusive education practices; Fundamental role of the inclusive teacher in specialized educational service
20	Benefits and limitations associated with the use of multiple assessment instruments to identify 6- and 7-year-old children with intellectual giftedness in the classroom. Benefits: the ability of the process to focus teachers on the individual child, as a learner and the information gathered by the various instruments to inform and direct teaching; Limitations: (un)equal access for families with low levels of English literacy and perceived subjectivity. Need to prioritize the identification of gifted characteristics in teachers, in the daily life of classes, without the need to be a health specialist.

Source: Prepared by the authors, 2023.

Among the articles included, 10 indicated that initial or continuing education becomes crucial in changing the perception of teachers with regard to AHSD. Regarding teacher training, 03 articles used specific training programs with certification, with pre and post test and obtained positive results in the identification of students with high abilities or giftedness. Cannaday and Courduff (2017) discuss the GATE Program (Education of the Gifted and Talented), which consists of education/training that corroborates a positive growth in teachers' perceptive knowledge about its importance in identifying characteristics of gifted behavior. Arantes-Brero and Capellini (2022) bring collaborative consulting as a continuing education program focused on demystifying beliefs about AHSD, but emphasize that teacher engagement in training is paramount for a positive result. Souto, Castro and Delou (2021) are categorical in stating that the teacher's knowledge about high abilities or

giftedness proved to be superficial even after the training offered after basic training, thus not bringing the appropriate perception of giftedness.

Teacher training is essential for the full development of their students. This occurs procedurally, throughout his experience as an educator, in a concrete reality of the classroom, historically and socially constituted, inside and outside the school. In this sense, the social representation it has of its students is intrinsically linked to pedagogical practice and to the teacher-student relationship.

In the case of students with gifted behavior, it is believed that this social representation is rooted in the conception of myths and beliefs around these subjects, thus hindering the process of identifying talents and skills.

In the "Stereotypes" category, barriers related to the social, economic, cultural and gender context influence the perception of teachers in relation to students. According to Matheis et al (2020), stereotypes directly influence the teacher's perception and their intervention in pedagogical strategies aimed at students with gifted behavior. According to the authors, myths and beliefs, not only in relation to students, but in relation to their teaching practice and attitudes, can bias the identification of gifted students, as well as prevent the development of their potentialities. Garcia-Barrera and De La Flor (2016) reinforce that the prevalence of myths attributed to students gives them a stereotyped profile that does not match reality and prevents them from fully developing their talents.

Regarding the aspects related to the scales of perceptions and characteristics, the articles highlight the importance of validation and reliability of the results of the different scales of characteristics of students with gifted behavior and how teachers perceive them. They reinforce how the initial and continuing education of teachers is deficient and inefficient in identifying the indicative criteria for high abilities or giftedness. Demirock and Ozcan (2016) developed a scale to measure teachers' perception of their students, taking into account the willingness to learn, linguistic, personality, learning and cognitive characteristics (Psychometric Scale of Perception of Gifted Students). The scale establishes a positive relationship between teachers' perceptions and attitudes about gifted students and the pedagogical strategies used. The authors highlight important points that emerged in the study: a) probability that the teachers most involved with gifted education perceive themselves as gifted and are attracted to this educational field; b) both the training and the scale of characteristics increase the perception of teachers in a positive way.

Regarding the category "inclusion and evaluation", De Angelis (2017) points to a movement of exclusion of students with gifted behavior from specialized educational services and makes us reflect on the importance of ensuring inclusion strategies that provide specific times and spaces to meet the needs of this public. Students with AHSD experience a time of invisibility in their school trajectory and have their rights to inclusion, supplementation and curricular enrichment denied.

We need to think that identification occurs from a detailed observation of striking signs of performance, and through a multidimensional evaluation that involves family, teachers and their peers. The classroom context becomes a fertile territory in the identification of students' skills, talents, difficulties and needs. It turns out that there is a gap between students with gifted behavior and deficient teacher training and their sociocultural representations in dealing with this public.

## **CONCLUSIONS**

The results showed that the perceptions of teachers in the identification of students with gifted behavior are biased by a deficient initial or continuing education that corroborates mistaken sociocultural representations, rooted in myths and stereotypes that bring implications and prejudices in the process of identification and inclusion of these subjects.

The categories analyzed, teacher education/stereotypes/scales of characteristics/inclusion and evaluation, are intrinsically related: there is an urgency for discussions of the theme in teacher education so that, through the deepening of the scales or criteria indicative of characteristics, they can identify students with gifted behavior and provide opportunities for experiences of exploration of areas of interest, of deepening of the knowledge acquired and that can develop academic, creative-productive, social, and emotional skills (Mohamed & Elhoweris 2022; Morales-Nava et al., 2021; Matheis et al., 2020; Yazici et al., 2017; Slater & Howitt, 2018).

The research contributes to the visibility of the identification of children and young people with AHSD and the guarantee of a meaningful and quality education, based on the perception of teachers and their pedagogical practices. It suggests that future research seeks to explore the teacher's knowledge about the different abilities of their students.

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