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Pedagogical Strategies for the Improvement of Reading Comprehension in Students with Autism Spectrum Disorder: A Case Study

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Abstract

This study analyzes the factors that influence reading comprehension in students with ASD and proposes pedagogical strategies to improve it. An explanatory case study was used with a 9-year-old boy diagnosed with grade 1 ASD, applying standardized tests such as the MARSI and LECTUM tests, interviews with teachers and classroom observations to evaluate his level of metacognition and reading comprehension. The results indicate that the student presented a moderate level of reading metacognition, but significantly low reading comprehension, with a predominant use of global reading strategies and less use of support strategies. These findings confirm that children with ASD have difficulties in reading comprehension, especially at the critical level. This study highlights the importance of adapting pedagogical strategies to the individual needs of students with ASD to improve their reading comprehension and foster their educational and social inclusion.

Keywords: *Autism Spectrum Disorder (ASD), Pedagogical strategies, Metacognition, Educational intervention.*

Austism Spectrum Disorder

Autism Spectrum Disorder (ASD) is a neurodevelopmental disorder whose concept has evolved over time, allowing a better understanding of its causes, clinical manifestations and treatments (Herrera-Del Águila, 2021). In the 1940s, Leo Kanner and Hans Asperger made the first descriptions of ASD, identifying atypical behavior patterns in children, with difficulties in social interaction, communication problems and repetitive behaviors. These observations were fundamental to conceptualize ASD as a developmental disorder (Canal Bedia et al., 2013).

Formal recognition of ASD was consolidated with its inclusion in diagnostic manuals, such as the Diagnostic and Statistical Manual of Mental Disorders (DSM) of the American Psychiatric Association. From the third to the fifth edition of the DSM, significant modifications have been made in the classification and diagnosis of autism spectrum disorders, reflecting a greater understanding of their clinical diversity and underlying dimensions (Canal Bedia et al., 2013). According to the International Classification of Diseases (ICD-11), ASD is defined as a neurodevelopmental disorder characterized by persistent difficulties in social communication and interaction (World Health Organization, 2019).

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One of the main transformations in the conceptualization of ASD occurred with the publication of the DSM-5, which defines it as a disorder that affects the variability of brain functioning, impacting the development of language and communication, both verbal and nonverbal. In addition, it introduces a classification in three degrees of severity: grade 3 ("needs very noticeable help"), grade 2 ("needs noticeable help") and grade 1 ("needs help") (American Psychiatric Association [APA], 2013).

These grades are distributed in three subareas: social relationship skills, symbolization and imagination skills, and language and communication skills (Universidad Internacional de Valencia, 2021). Regarding language and communication abilities, children with grade 1 ASD can develop oral language without significant alterations in lexis and syntax, but present difficulties in the social use of language or pragmatics. Children with grade 2 may use words, gestures and signs learned in specific communication programs, but may also present echolalia, idiosyncratic and repetitive language, as well as inversions in the use of pronouns. Finally, in grade 3, total or functional mutism predominates, and communication is based on instrumental behaviors, such as leading an adult by the hand to a desired object. In some cases, simple verbal utterances are associated with environmental routines (Universidad Internacional de Valencia, 2021). In this context, reading comprehension is a fundamental area of intervention, as it directly influences the educational participation and social integration of people with ASD (Celis Alcalá & Ochoa Madrigal, 2023). This is defined as the ability to interpret the content of a text, understanding both the meaning of the words and the overall idea conveyed by the message (De-Las-Heras, 2019).

The Ministry of Education (2005) (referenced in Lujano, 2022), reading comprehension is developed at three levels: literal, where the direct meaning of the text is deciphered; inferential, where main ideas and the author's intention are identified, allowing the reader to draw deeper conclusions; and critical, where positive and negative aspects of the content are analyzed, involving personal criteria and knowledge of the subject.

Several studies have shown the difficulties of children with ASD in the inferential level of reading comprehension, as they tend to process information more literally and may have difficulty understanding emotions and intentions implicit in texts (Nation et al., 2004). Reading comprehension, therefore, involves not only decoding words, but also the ability to infer meaning, make connections, and synthesize information (Cooper, 2012).

Recent research has identified different reading comprehension profiles in students with ASD according to their level of difficulty (Baixauli et al., 2020). The first profile corresponds to those students who do not present deficits either in word reading or in listening or reading comprehension. In the second and third profiles, difficulties in reading comprehension are observed, although without problems in word reading, with the third profile showing the lowest performance. Finally, the fourth and fifth profiles present mixed deficits, which implies difficulties in both word reading and reading comprehension, evidencing a greater impact on the process of learning to read in these students. ASD affects phonological memory, which is fundamental for the processing and temporary storage of auditory and verbal information. This difficulty can interfere with the acquisition of new words and language development, directly

impacting reading comprehension (Ares-Comba, 2015). Likewise, executive functions, essential for self-regulation, planning and cognitive flexibility, are also altered in ASD, hindering the organization and processing of text. These difficulties are compounded by comorbidities associated with ASD, such as deficiencies in theory of mind and language pragmatics, which add further complexity to reading comprehension (Serrano Ortiz, 2013).

Despite advances in inclusive education and in addressing the specific needs of students with ASD, research on reading comprehension in this group continues to face challenges in its assessment and pedagogical approach. Currently, there is a significant gap in knowledge about how students with ASD process reading and what strategies can improve their performance in this area (Caiña Varona, 2020).

This research aims to explore and analyze in depth the difficulties faced by students with Autism Spectrum Disorder (ASD) in reading comprehension, identifying pedagogical strategies and effective interventions to improve their performance. To this end, the use of various strategies is proposed, such as the use of educational material in visual format (images, graphics and videos) to facilitate comprehension and retention of information (Pinto Díaz, 2020), reading experiences based on reality and of interest to the student (Pinto Díaz, 2020), the organization of group reading activities to strengthen both reading skills and social and communicative skills (Palser et al., 2022), the implementation of multisensory strategies involving visual, auditory and tactile stimuli to improve content retention (Buñay & Cazorla, 2023) and the integration of assistive technologies, such as applications and software designed to support reading learning in students with ASD (Badillo-Jiménez & Iguarán-Jiménez, 2020). The study will examine the practical implications for educators and professionals in order to improve the quality of teaching and promote a more inclusive educational environment. Based on the review of various studies, the following research question is posed: What learning factors affect the reading comprehension of students with ASD and what are effective strategies to improve their performance in this context?

To answer this question, a general objective and several specific objectives are established. The general objective is to design and implement pedagogical strategies that effectively address the reading comprehension needs of students with ASD. The specific objectives include investigating the relationship between the development of reading comprehension skills and emotional well- being in these students, analyzing how individual characteristics (cognitive level and degree of social impairment) influence reading comprehension, identifying individual learning needs, providing educational strategies for inclusive environments, implementing and evaluating such strategies over a given period, and exploring the benefits of collaboration between teachers, parents, and peers in the development of reading comprehension in students with ASD.

Based on these objectives, the study posits three hypotheses: H1 argues that the student with ASD will show a lower use of metacognitive reading strategies compared to neurotypical students; H2 proposes that their overall reading comprehension will be lower than expected in neurotypical students; and H3 suggests that tutor interviews and classroom observations will reveal that the reading comprehension challenges of the student with ASD are closely related to difficulties in metacognition and in the application of reading strategies.

The review of the problem focuses on identifying the specific barriers that affect reading comprehension in students with ASD, exploring factors such as vocabulary, lexis, and attention, and analyzing how they impact the acquisition of reading skills. Key definitions and concepts related to ASD and reading comprehension will be integrated and theories and approaches that have been developed to address this problem will be considered. Also, previous studies that have explored the relationship between ASD and reading comprehension will be included in order to provide a solid theoretical framework for this research (Vazquez-Vazquez et al., 2020).

Method

The study was conducted with a nine-year-old boy diagnosed with Autism Spectrum Disorder (ASD) grade 1, who was in 4th grade of Primary Education in an educational center in Cadiz. In order to obtain a comprehensive view of his educational and family environment, we worked in collaboration with his teacher and parents. The diagnosis of the student was made following the ASD circuit applied by the Child and Adolescent Mental Health Units (USMIJ) in Cadiz. This process included interviews with parents, direct observation and evaluation by a multidisciplinary team of health professionals. A clinical history was taken and standardized tools such as the ADOS-2 and the ADI-R were applied, which allowed the severity of ASD to be determined (Lord et al., 2015; Rutter et al., 2024). The study was approved by the ethics committee of the UOC Faculty of Education and complied with the ethical principles of the Declaration of Helsinki (World Medical Association, 2013) and data protection regulations (Vollmer, 2022). All participants signed an informed consent to ensure the ethics of the research process.

Several instruments were used for data collection. First, the MARSI Test (Metacognitive Awareness of Reading Strategies) by Mokhtari and Reichard (2002) assessed the reading metacognition of students with ASD. This test consists of 24 Likert-scale questions and measures three types of strategies: global, problem-solving and support (Jiménez et al., 2009). To assess reading comprehension, the LECTUM test (Riffo et al., 2011), based on a psycholinguistic model, was applied. This test measures three dimensions of comprehension: textual, pragmatic and critical (Heit, 2012). It consists of five texts of different typologies and 40 multiple-choice items to evaluate the student's reading performance. An ad hoc interview was designed with ten open-ended questions addressed to the teacher, structured in three blocks: observations about the student, pedagogical strategies and communicative aspects (Baquerizo & Castillo, 2023). Classroom observations, recorded by means of an evaluation rubric, were also carried out to analyze the educational environment and the student's interactions. Finally, a contextual observation instrument was designed to evaluate the student's reading comprehension in a natural environment.

Dependent and independent variables were defined in this study. The dependent variables included the degree of self-knowledge in reading comprehension of the student with ASD, evaluated with the MARSI Test, as well as the results in the LECTUM test,

which measured textual, pragmatic and critical comprehension. The student's performance in a semi- structured interview and classroom observations, recorded by means of a rubric, were considered. The independent variables included the reading comprehension strategies used by the student, the text typology of the LECTUM test, the pedagogical practices in the classroom, and the contextual stimuli of the educational environment. The procedure began with obtaining informed consent from the parents and coordination with the educational center. Two meetings were held with the student at home to apply the MARSI Test and the LECTUM test, in order to evaluate their reading comprehension in a familiar environment. Subsequently, an interview was conducted with the teacher, focusing on his or her experience with teaching reading comprehension to the student. Finally, classroom observations were conducted, documenting the student's performance during the reading sessions and the use of pedagogical strategies.

The data analysis of this study was carried out under a quantitative approach, compiling the information obtained in an Excel file for processing. The results of the LECTUM test and the MARSI test were analyzed, evaluating student performance in reading comprehension and in the use of metacognitive reading strategies. Initially, measures of central tendency-mean, mode, and median-were calculated for each of the tests in order to identify patterns in student performance. In the case of the MARSI test, responses were analyzed in its three dimensions: global reading strategies, problem-solving strategies, and support strategies. For the LECTUM test, the dimensions of textual, pragmatic and critical comprehension were examined. To facilitate the interpretation of the results, bar graphs were generated, which allowed a clear visualization of the differences in student performance in the different categories evaluated. Finally, the total percentage of correct scores in both tests was calculated, which helped to establish the student's overall level of reading comprehension and his or her level of metacognitive awareness in reading. These analyses provided a detailed view of the student's strengths and difficulties, allowing a comparison with other studies on reading comprehension in children with ASD and suggesting the need for specific pedagogical interventions.

From the statistical and quantitative analysis carried out on each of the instruments used in accordance with the proposed case study, the following results were obtained.

First, in order to describe metacognition about studying in the sample analyzed, the mean, mode and median of the overall score obtained by the student in the MARSI Test was calculated (see Figure 1).

Figure 1

Calculation of the mean, mode and median of the MARSI test.

Mean

$$\frac{4 + 12 + 21 + 24 + 5}{24} = \frac{66}{24} = 2{,}75$$

Mode

1	**2**	**3**	**4**	**5**
4	6	7	6	1

Median

1 1 1 1 2 2 2 2 2 2 3 3 3 3 3 3 3 4 4 4 4 4 4 5

$3+3=6\ /\ \frac{6}{2}=3$

Tabla 1

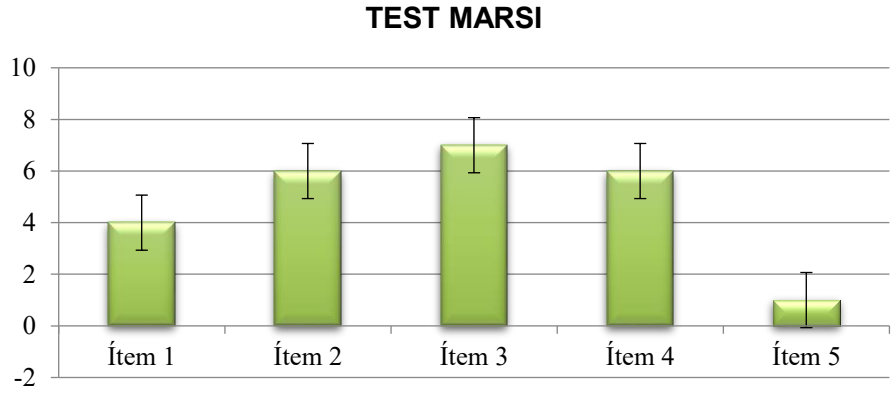
Mean, median and mode MARSI test

TEST MARSI	**M**	**Me**	**Mo**
RESULTS	2,75	3	3

Note: M = mean, Me = median and Mo = mode. These results correspond to the student with grade 1 ASD, taking into account that he is in the 4th grade of Primary Education.

For the interpretation of the MARSI test results, Mokhtari and Reichard (2002) propose three levels of reading strategy use. Mean values of 3.5 or higher are considered to indicate a high level; mean values of 2.5 to 3.4 reflect a moderate level; while values below 2.4 indicate a low frequency of strategy use during the act of reading. The total mean score of the questionnaire (2.75), which according to the levels established by Mokhtari and Reichard (2002) placed the student at a moderate level of reading metacognition awareness. The item referring to "sometimes I do this" was the most selected item by the student in the test, with a total of 7 times. Thus, it was the result of both the median and the mode. A frequency analysis was performed for each strategy, item and dimension (see Figure 2 and 3).

Figure 2

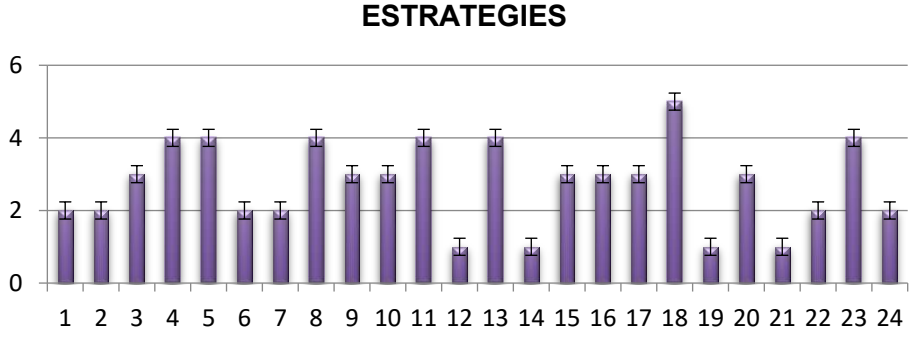


Note: This graph corresponds to the response obtained in each of the items that make up the MARSI Test, being item 1 "I never do it", item 2 "I do it only occasionally", item 3 "I sometimes do it", item 4 "I usually do it" and item 5 "I always do it".

In the analysis of the items, it was observed that there was a predominance of responses in the category "Sometimes I do it" (response score 3) in 7 of the statements, with a great difference with the item "I always do it" (response score 5), selected only once by the student.

Figure 3

Data frequency analysis of the items and dimensions of the MARSI test.



Note: The second graph refers to the three strategies that make up the test: global reading strategies (each question belonging to this strategy is marked in green), problem-solving strategies (colored blue) and support strategies (indicated by the color orange).

In relation to the analysis of the strategies, it was observed that the highest values (5 points) referring to "always or almost always do this" were found in the item referring to the use of bold type to identify key information. On the other hand, the lowest value (1 point) on "never or almost never do this", was detected in several items, related to the use of dictionaries, underlining text information, checking the degree of comprehension of the text and evaluating text information.

It was highlighted that global reading strategies were the most used, with a mean value of 1.08, while reading support strategies were the least used, with a mean value of 0.6.

Finally, the score obtained by the student in the three dimensions into which this test is divided was counted (see Table 2).

Table 2
Calculation of percentages obtained in the dimensions of the test.

Dimensiones	**Porcentajes**
Estrategias de lectura globales	22%
Estrategias de resolución de problemas	20%
Estrategias de apoyo	13%
Puntuación total	55%

Note: The percentage of each of the dimensions of the test has been calculated from the score obtained in each of them. Starting from the fact that the maximum score that can be obtained in the test is 120 points, which corresponds to 100%, a rule of three has been made for each of the strategies and finally the percentage obtained by the student in the test has been calculated

The table shows how the highest value was obtained in the global reading strategy with 22%. The total score obtained by the student in the whole test was 55%. Second, as with the MARSI test for the LECTUM test, the mean, mode and median of the overall score obtained by the student for both correct and incorrect questions was calculated (see Figure 4)

Figura 4
Cálculo de la media, moda y mediana del LECTUM.

Average correct questions

$$\frac{3+1+2+3+15}{40} = \frac{24}{40} = 0.6$$

Average number of incorrect questions

$$\frac{3+6+2+4+1}{40} = \frac{16}{40} = 0.4$$

Mode right and wrong questions

	Text 1	Text 2	Text 3	Text 4	Text 5
C	3	1	2	3	15
I	3	6	2	4	1

Median correct and incorrect questions

3 3 1 6 2 2 3 4 15 1

$2+2=4\ /\ \frac{4}{2}=2$

Table 3

Median correct and incorrect questions

	M	**Me**	**Mo**
Correct	0.6	2	2
Incorrect	0.4	2	2

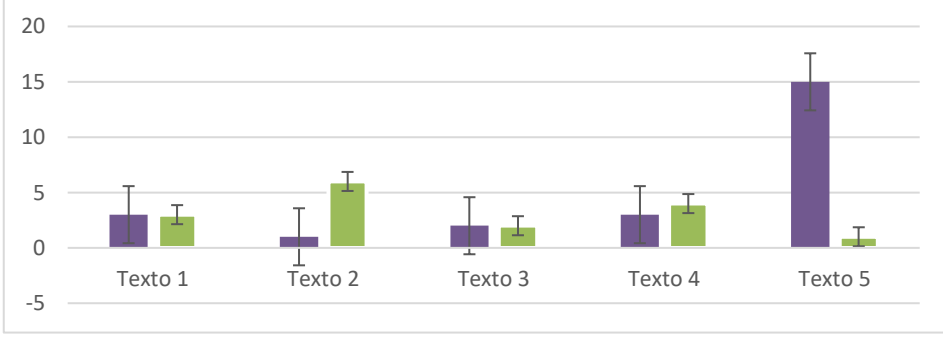
Note: M = mean, Me = median and Mo = mode. These results correspond to the questions answered correctly and the questions answered incorrectly by the student with ASD, taking into account that he/she is in 4th grade of Primary Education.

The mean score obtained in correct questions was 0.6, while in incorrect questions an average of 0.4 points was obtained. Analyzing the median and mode of the correct and wrong answers obtained by the student in the LECTUM test, it was observed that both have the same result of 2 points.

Next, a frequency analysis was carried out on the correct and incorrect scores obtained in each of the texts that make up the test and on the dimensions that evaluate textual, pragmatic and critical comprehension (see Figure 5 and 6).

Figure 5

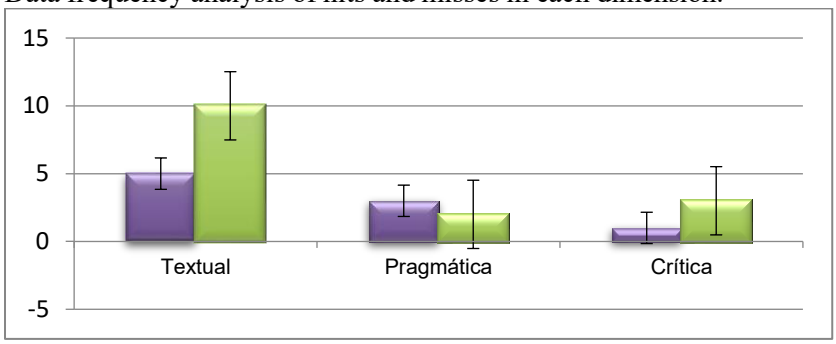
Data frequency analysis of hits and misses in each text.



Note: This gra corresponds to the correct and incorrect answers obtained by the student in each of the 5 texts that make up the test. The red color represents the incorrect answers, and the green color represents the correct answers.

Figure 6

Data frequency analysis of hits and misses in each dimension.



Note: This graph refers to the three dimensions evaluated in this test: textual, pragmatic and critical. In this graph, the yellow bars represent the successes obtained and the blue color represents the errors.

In the first graph, it was detected that text 5 had the highest number of correct answers, with a total of 15 correct questions and only one error, while text 2 had a higher number of errors, specifically 6, with only one correct answer.

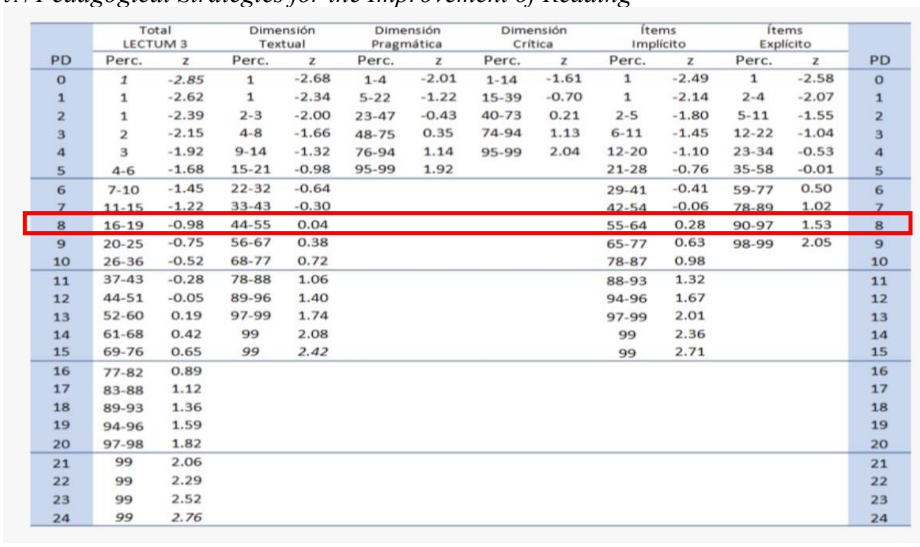
In the second graph, the highest score was obtained in the textual competency, despite its large number of incorrect questions, and the critical competency was the one in which the student scored the least points. In addition, by calculating the direct score and following the LECTUM norms (see Figure 7), it was possible to know what the percentile and standard score were for the total test, the dimensions and the items.

Note: The formula for calculating the direct score consists of subtracting the result of the mcorrect questions minus the result of the incorrect questions.

Correct questions - Incorrect questions / 24 - 16= 8

Figure 7

Correction scales



PD	Total LECTUM 3		Dimensión Textual		Dimensión Pragmática		Dimensión Crítica		Ítems Implícito		Ítems Explícito		PD
	Perc.	z	Perc.	z	Perc.	z	Perc.	z	Perc.	z	Perc.	z	
0	*1*	*-2.85*	1	-2.68	1-4	-2.01	1-14	-1.61	1	-2.49	1	-2.58	0
1	1	-2.62	1	-2.34	5-22	-1.22	15-39	-0.70	1	-2.14	2-4	-2.07	1
2	1	-2.39	2-3	-2.00	23-47	-0.43	40-73	0.21	2-5	-1.80	5-11	-1.55	2
3	2	-2.15	4-8	-1.66	48-75	0.35	74-94	1.13	6-11	-1.45	12-22	-1.04	3
4	3	-1.92	9-14	-1.32	76-94	1.14	95-99	2.04	12-20	-1.10	23-34	-0.53	4
5	4-6	-1.68	15-21	-0.98	95-99	1.92			21-28	-0.76	35-58	-0.01	5
6	7-10	-1.45	22-32	-0.64					29-41	-0.41	59-77	0.50	6
7	11-15	-1.22	33-43	-0.30					42-54	-0.06	78-89	1.02	7
8	16-19	-0.98	44-55	0.04					55-64	0.28	90-97	1.53	8
9	20-25	-0.75	56-67	0.38					65-77	0.63	98-99	2.05	9
10	26-36	-0.52	68-77	0.72					78-87	0.98			10
11	37-43	-0.28	78-88	1.06					88-93	1.32			11
12	44-51	-0.05	89-96	1.40					94-96	1.67			12
13	52-60	0.19	97-99	1.74					97-99	2.01			13
14	61-68	0.42	99	2.08					99	2.36			14
15	69-76	0.65	*99*	*2.42*					99	2.71			15
16	77-82	0.89											16
17	83-88	1.12											17
18	89-93	1.36											18
19	94-96	1.59											19
20	97-98	1.82											20
21	99	2.06											21
22	99	2.29											22
23	99	2.52											23
24	*99*	*2.76*											24

Note: This image is taken from the scoring rules of the LECTUM test. Once the direct score has been calculated, as indicated in this figure with the red box it is 8 and from this we can know the rest of the student's scores in that test. PD= direct scores, Perc=percentile rank and Z=standard score.

For the interpretation of the LECTUM test results, the performance scales provided by the application itself were followed. The direct scores were considered as references, being, less than 4 reflect a very low level, 4-8 low level, 9-17 normal, 18-21 high and greater than 21 very high. The direct score of the questionnaire was 8, which placed the student in a very low level of reading comprehension, which implies learning difficulties. It was noted that in the dimensions of this test, the student obtained a higher number of correct scores in the textual competence with a total of 5 correct scores and a lower score in the critical competence with only one correct score.

Finally, the percentage obtained in both the overall test and the dimensions was calculated (see Table 4).

Table 4

Calculation of percentages of overall score and dimensions.

	Correct	**Incorrect**

General	60%	40%
Dimensions	22%	37,5%

Note: The percentage obtained in the correct and incorrect answers to both the test in general and the dimensions of the LECTUM has been calculated. Starting from the fact that the maximum score that can be obtained in the test is 100 points, which corresponds to 100%, a rule of three has been used to calculate both percentages.

When calculating the percentages, it was found that the student obtained a higher percentage of correct questions (60%) than errors (40%). However, in the dimensions, the highest percentage corresponds to incorrect questions (37.5%) and the lowest to correct questions (22%).

Video conferencing with the teacher of the student with ASD reveals difficulties in word comprehension and a tendency to focus on details. Despite progress in reading comprehension, there is resistance to less interesting texts and difficulties in transferring skills. The teacher uses visual materials and larger print. Communication with parents and specialists is key. Personalized educational interventions are needed.

Overall, the case study results provide a moderate level of reading metacognition awareness, according to Mokhtari and Reichard's (2002) MARSI Test, but very low reading comprehension according to the LECTUM test. Although global reading strategies are frequently used, reading support strategies are less common. It is critical to address these differences in order to create educational interventions that improve both textual and critical comprehension.

Conclusion

The present study aimed to analyze reading comprehension difficulties in a student with Autism Spectrum Disorder (ASD) and to evaluate the effectiveness of various pedagogical strategies to improve his performance. The results obtained from the MARSI test and the LECTUM test revealed that the student presents a moderate level of reading metacognition, but faces serious difficulties in reading comprehension, especially in critical competence.

Regarding metacognition, the MARSI Test showed that the student most frequently employs global reading strategies, while support and problem-solving strategies are used less frequently. This suggests that the student has a partial awareness of his reading processes, but lacks effective metacognitive strategies to optimize his comprehension. In the reading comprehension assessment through the LECTUM test, the results indicated a very low level of reading comprehension, with greater difficulties in critical competence, which coincides with previous research indicating deficiencies in deep interpretation and in the transfer of information to different contexts (Rivero Contreras & Saldaña Sage, 2021; Brown et al., 2013).

The analysis of the hypotheses confirms that students with ASD use fewer metacognitive strategies compared to neurotypical students, as reflected in the scores obtained in the MARSI test. The LECTUM test reaffirms the second hypothesis by showing a lower overall reading comprehension in the student with ASD. The third hypothesis, which establishes a relationship

between difficulties in reading comprehension, problems in metacognition and the application of reading strategies, is supported by the observations made and the interview with the teacher, who highlighted the student's tendency to focus on details and his difficulty in understanding implicit meanings.

The findings of this study are consistent with previous research that has reported reading comprehension difficulties in children and adolescents with ASD (Jones et al., 2009; Davidson & Ellis Weisner, 2014). These studies identified profiles of students with comprehension deficits without word decoding problems, as well as mixed profiles with difficulties in both reading and word comprehension. However, there are studies with divergent results, such as that of Jiménez Rodríguez et al. (2017), which found that some children with ASD may have reading comprehension skills similar to those of their neurotypical peers, particularly in visual memory and literal comprehension tasks. Also of note is the research by Kasari et al. (2013), which suggests that, despite low intelligence scores, some children with ASD possess significant language comprehension skills, highlighting the importance of employing more sensitive and specific assessment methods.

Discrepancies between studies can be attributed to various factors, such as differences in participant characteristics, variability in educational settings, and access to specialized pedagogical interventions. The methodology used in each study influences the results, as assessment tools may capture different aspects of the reading comprehension process.

This study presents several strengths, among them the use of standardized tests such as the MARSI and LECTUM tests, which allowed us to obtain quantifiable data on students' metacognitive and reading comprehension skills. Likewise, classroom interviews and observations provided valuable qualitative information about their performance in a real environment. However, one of the main limitations is the sample size, as this was a single case study, the results cannot be generalized to the entire population with ASD.

The results of this study show that students with ASD, such as the case analyzed, present significant difficulties in reading comprehension, especially in critical competence. Although the student showed a moderate level of reading metacognition, support and problem-solving strategies were not frequently used, which negatively impacted his reading performance.

Pedagogical strategies adapted to the student's needs, such as the use of visual materials, reading texts of interest and the integration of assistive technologies, can contribute to improve reading comprehension in students with ASD. However, the effectiveness of these strategies should be evaluated over time through longitudinal studies to determine their actual impact on learning.

Considering the limitations of this study, future research should expand the sample size and consider the use of a parametric design to generalize the findings to a larger population. It would also be relevant to explore the impact of additional variables, such as language development, socioemotional skills, and self-regulation, on the reading comprehension of students with ASD.

In practical terms, this study highlights the need to implement specific interventions to

strengthen reading skills in this population. In addition, it underlines the importance of collaboration between teachers, families and specialists to design personalized educational strategies that facilitate learning and school inclusion of students with ASD.

Finally, it is recommended to continue research in this line, promoting studies that combine quantitative and qualitative approaches to obtain a more complete picture of the strengths and needs of students with ASD in the area of reading comprehension. This will allow to develop more precise theoretical models and more effective pedagogical strategies to guarantee their equitable access to education.

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