

## Verbal Communication and Its Relationship to Academic Achievement in Children with Autism in Inclusive Settings A Field Study at the Khababa Abdelwahab School in Setif

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Received : 05/12/2025 ; Accepted : 22/03/2026 ; Published : 24/05/2026

### Abstract:

Through this study, we sought to highlight the relationship between verbal communication and academic achievement among children with autism in mainstream settings. The aim was to understand how the level of verbal communication affects these children's academic performance and the importance of integrating linguistic and educational aspects to achieve the best outcomes for children with autism in mainstream schools. This study was conducted by applying the Verbal Communication Skills Scale for children with autism spectrum disorders to determine the scores of the study sample and the extent to which inclusive classes contribute to improving linguistic communication in children with autism, across all dimensions of the scale, namely recognition and comprehension, verbal imitation, expression and naming, skills that reflect the extent of the autistic child's development in terms of verbal communication.

**Keywords:** Verbal Communication, Relationship to Academic, Children with Autism, Inclusive Settings

### Introduction:

The exchange of ideas, knowledge and emotions is facilitated through verbal communication, which serves as the cornerstone of both learning and social interaction. However, children with autism face significant obstacles when it comes to acquiring verbal communication skills. Despite these difficulties, these skills are essential for academic achievement and successful integration into social environments.

Recently, there has been a growing interest in the education of children with autism and their inclusion in mainstream schools. The aim of this inclusion is to create an inclusive educational environment that allows children with autism to interact with their peers and to promote the development of their academic and social abilities. In this context, verbal communication plays a pivotal role in enhancing the academic achievement of these children.

The purpose of this paper is to examine the relationship between verbal communication skills and academic achievement among children with autism integrated into mainstream schools. Through an analysis of existing research and the conduct of field studies, we seek to understand how improving verbal communication skills affects the academic performance of these children. In addition, we will explore the various factors influencing this relationship, including the educational environment, support from teachers, and specialised training initiatives.

Understanding this relationship is an important step towards improving the educational strategies and support provided to children with autism. Through this, we can offer practical recommendations for developing educational programmes that contribute to enhancing verbal communication and achieving better academic attainment. This, in turn, will provide these children with greater opportunities for inclusion and success in the school environment and their daily lives.

### **1- The Problem:**

Currently, autism spectrum disorder falls under the classification of neurodevelopmental disorders, and its initial indicators appear during the first three years of a child's life. The disorder manifests in three distinct areas: difficulties with verbal and non-verbal communication, challenges in social interaction, and restrictions in activities and tasks. It is considered one of the disorders that significantly affects verbal communication and the ability to interact socially. (Jaber and Ahmed, 2018, p. 7)

A child with this disorder has impaired functioning in at least one aspect of social interaction, language use, and symbolic or imaginative play. The child's evident deficit in spoken language (delayed or absent development) leads to an inability to engage in social interaction and to communicate verbally and non-verbally with others.

Verbal communication is a characteristic that distinguishes humans from other living beings, as it enables individuals, including those with autism, to recognise objects and their corresponding names, to acquire new knowledge through social interactions, and to navigate everyday situations by expressing themselves through speech and language. (Ajwa, 2018, p. 403)

Difficulties with this skill are classified as core and fundamental disorders that affect the manifestations of natural development and social interaction in children with autism, and include language and communication disorders. The failure of a child with autism to acquire verbal communication skills negatively affects their social interaction and verbal communication.

Accordingly, there is a solution that parents may resort to in order to address this problem in their children, namely school integration, which is a coordinated process based on practical principles and methodological conditions.

The aim is to provide opportunities for children with special needs to attend mainstream classes alongside their peers, whilst offering as many opportunities as possible for modelling and adopting the appropriate behaviours exhibited by typical individuals. This enables them to achieve a certain level of proficiency in verbal communication, thereby improving their academic achievement. This is highlighted in a study by Johnson & Green (2017), which examined the relationship between verbal communication skills and academic achievement among children with autism integrated into mainstream classes. The study used standardised measures to assess verbal communication skills and academic achievement. It found that children with better verbal communication skills achieved higher marks in academic tests, were more engaged in classroom activities, and were less prone to social isolation. Similarly, a study by

by Brown & White aimed to assess the effectiveness of language support programmes in schools and their impact on the academic performance of children with autism. The results of this study showed that the language support provided in schools helped to improve the children's verbal communication skills, leading to an increase in their academic achievement across all subjects, including science and mathematics.

The acquisition of verbal communication skills by children with autism—which include recognition and comprehension, verbal imitation, and expression and naming—helps to improve their social interaction and academic achievement, as indicated by the following studies:

The study by Harris & Handelman (2014), which aimed to evaluate the impact of training programmes on recognition and comprehension on the academic achievement of children with autism integrated into mainstream classrooms. The results showed that children who participated in the training programmes demonstrated significant improvement in their recognition and comprehension abilities, which had a positive impact on their academic performance, particularly in reading and reading comprehension. The findings of this study confirmed the conclusions we reached in our own study that improving the recognition and comprehension skills of children with autism who are integrated into mainstream settings has a positive impact on their academic achievement.

The study by Ingersoll & Schreibman (2006) focused on analysing the impact of training in verbal imitation skills on the academic achievement of children with autism integrated into mainstream schools. The results showed that training in verbal imitation skills led to a marked improvement in the children's language abilities and an increase in their academic grades, particularly in language and mathematics. The findings of this study corroborate the conclusions reached in our own study, namely that verbal imitation skills have a significant impact on the academic achievement of children with autism integrated into mainstream schools. Improving this skill can lead to marked improvements in academic performance.

Similarly, the study by Paul & Norbury (2012) aimed to evaluate the impact of verbal expression skills training programmes on the academic performance of children with autism. Training programmes were implemented to improve verbal expression skills. The results showed that children who received verbal expression skills training demonstrated a marked improvement in their verbal communication, which contributed to increased interaction in the classroom and improved academic performance.

Finally, the study by Carlo, Christy & Carpenter (2000) aimed to analyse the effect of training in naming skills on the academic achievement of children with autism. Training programmes were implemented to improve naming skills. The results showed that training in naming skills led to a marked improvement in the children's ability to name objects and events, which helped them improve their academic performance, particularly in subjects requiring strong verbal communication skills such as science and language. The findings of these studies confirm the conclusions we reached in our study: that improving expressive and naming skills in children with autism in mainstream settings has a positive impact on their academic achievement.

This leads us to pose the following general question:

↔ What is the nature of the relationship between verbal communication and academic achievement in children with autism who are integrated into mainstream education?

And the following specific questions:

↔ Are there statistically significant differences between recognition and comprehension skills and academic achievement in children with autism who are integrated into mainstream education?

↔ Are there statistically significant differences between verbal imitation skills and academic achievement among children with autism in mainstream education?

↔ Are there statistically significant differences between recognition and naming skills and academic achievement among children with autism in mainstream education?

## 2- Research hypotheses:

General hypothesis:

There is a statistically significant relationship between verbal communication and academic achievement among children with autism in mainstream education.

Specific hypotheses:

↔ There are statistically significant differences between recognition and comprehension skills and academic achievement among children with autism in mainstream education.

↔ There are statistically significant differences between imitation skills and academic achievement among children with autism in mainstream schools.

↔ There are statistically significant differences in expressive and naming skills and academic achievement among children with autism who are integrated into mainstream schools.

## 3- Aims of the study:

When conducting any study, there are a number of aims that it seeks to achieve based on a set of facts relating to a specific social group. We have defined the aims of our study as follows:

- To identify the relationship between verbal communication and academic achievement in a sample of children with autism integrated into mainstream schools.
- To reveal the relationship between verbal communication skills (recognition and comprehension skills) and academic achievement in children with autism integrated into mainstream schools.
- To investigate the relationship between verbal communication skills (verbal imitation) and academic achievement among children with autism integrated into mainstream schools.
- To investigate the relationship between verbal communication skills (expression and naming) and academic achievement among children with autism integrated into mainstream schools.

## 4- Definition of study concepts:

**A- Children with autism:** These are children who suffer from a developmental disorder resulting in deficits in social interaction and communication, diagnosed during early childhood, alongside delays in cognitive, linguistic and emotional development, accompanied by stereotyped behaviours that are socially unacceptable.

**b- Inclusion in mainstream schools:** The integration of children with autism or special educational needs into mainstream classrooms alongside their peers, with provision of specialised support, so as to ensure they receive a balanced education alongside their peers and are afforded opportunities for full engagement with their peers, thereby facilitating healthy social adaptation.

**C. Verbal communication:** Verbal communication is the use of language to convey information through speech or sign language. It is also the process of conveying thoughts and feelings between individuals through spoken language, which involves the use of words, phrases and sentences to express ideas and convey meanings....

### **D. Academic Achievement:**

This is a measure of a student's academic performance across various subjects. Assessment of academic achievement typically involves evaluation through tests, examinations, projects and classroom activities; this assessment reflects the extent of the student's understanding of the subject matter and their ability to apply the knowledge and skills acquired. Academic achievement is

considered an indicator of the effectiveness of teaching and learning, and of the student's ability to benefit from the educational opportunities available.

1- Study Procedures:

2- Scope of the Study:

- Geographical scope: This study was conducted on 'The relationship between verbal communication and academic achievement in children with autism'. As the topic required practical validation and verification of the proposed hypothesis, the fieldwork was carried out at the Khababa Abdelwahab School.

⌘ Presentation of the study site: Khababa Abdelwahab School – Setif –

Khababa Abdelwahab School name

Ikhwa Jemili District – Setif Municipality – Location

191465C National registration number

19001 Geographical code

1939 Date of establishment

01-10-1940 Date of opening

16 Number of classrooms

06 + integrated section Number of cohorts

600 Capacity of the institution

4,600 m<sup>2</sup> Total area

Table No. (1) provides an overview of the school's details.

### **5- Research Methodology:**

In our study, we will adopt a descriptive correlational approach, as the nature of the study aims to reveal the relationship between verbal communication and academic achievement among integrated children with autism.

### **6- Study Sample:**

The study sample is a part of the study population and must therefore possess the characteristics and traits of that population and be representative of it, in relation to the research topic (children with mild autism who are integrated into mainstream education). The study sample comprises five cases (male and female), selected using a non-random, purposive sampling method, and chosen according to the following criteria:

- The sample members must not have any other associated disabilities.
- Ensuring that none of the children in the sample had previously received any counselling or therapeutic programmes.
- The age of the sample members must be no less than 6 years and no more than 31 years.
- They must have approximately the same cognitive and acquired abilities and skills.
- They must not suffer from any comorbid disorders.
- They must be capable of learning and communicating.
- The degree of autism must be mild to moderate.
- They must not be affected by social circumstances (divorce, death of a parent) or economic circumstances.
- Similar duration of inclusion

Number of individuals Severity of disorder Age of sample children

1 Mild 12

- 2 Mild 11
- 3 Mild 13
- 4 Mild 11
- 5 Moderate 10

Table 2 shows the study sample for the experimental group.

The table shows that their disorder ranges from mild to moderate and that their ages range from 10 to 13 years

5- Research tools

♣ Scale:

- Definition of the scale: We used the Verbal Communication Scale for Children with Autism, developed by the researcher Hana Shehata Ahmed Abdel Hafiz.

The procedures of the current study required the development of a scale to assess verbal communication skills in children with autism spectrum disorder, in order to measure their level of verbal communication before and after the implementation of the programme used in the study.

### 1- Presentation of study results:

1-1- Presentation of descriptive statistics for the verbal communication scale in children with autism spectrum disorder. (Recognition and understanding, verbal imitation, expression and naming):

Variables	Sample size	Mean	Standard deviation	Skewness	Kurtosis
Recognition and understanding skill	5	31.40	1.51	-1.118	1.456
Verbal imitation	5	23.60	3.50	-0.025	-2.064
Expression and naming	5	35.80	2.16	-2.032	4.151
Verbal Communication Scale	5	86.00	5.19	-0.677	-2.095

Table 8: Shows the results of the descriptive statistics for the Verbal Communication Scale among children with autism spectrum disorders. (Following recognition and comprehension, verbal imitation, expression and naming)

The results in the table show that the mean score for imitation is 31.40 with a standard deviation of 1.51; the mean score for verbal imitation is 23.60 with a standard deviation of 3.50; and the mean score for expression and naming is 35.80 and a standard deviation of 2.16, whilst the arithmetic mean for the expression and naming skill is 35.80, and the arithmetic mean for the verbal communication scale is 86.00 with a standard deviation of 5.19.

It is clear from the results in the table that all skewness coefficients for the study variables fall within the range of +1.1, and that the kurtosis coefficients for the variables fall within the range of +3.3; this indicates that the data for the variables follow a normal distribution.

Figure 1: Shows the results of the descriptive statistics for the verbal communication scale among children with autism spectrum disorders. (Recognition and comprehension, verbal imitation, expression and naming).

### 2- Presentation and analysis of the study hypotheses:

#### 1- Presentation and analysis of the results of the general hypothesis:

The hypothesis was tested as follows:

H0: There is no statistically significant relationship between verbal communication and academic achievement in children with autism spectrum disorder at a significance level of  $\alpha=0.05$ .

H1: There is a statistically significant relationship between verbal communication and academic achievement in children with autism spectrum disorder at a significance level of  $\alpha=0.05$ .

Table 9: Shows the relationship between verbal communication and academic achievement in children on the autism spectrum

Verbal communication

Academic achievement Spearman's correlation coefficient  $r$  0.707

p-value 0.001

Sample size 5

The results in the table show that the correlation coefficient between academic achievement and verbal communication is 0.707, indicating a strong positive correlation; thus, a change in academic achievement is accompanied by a change in verbal communication as well. Furthermore, the correlation is statistically significant at a p-value of 0.001, as this is below the significance level of  $\alpha = 0.05$ . Consequently, we reject the null hypothesis, accept the alternative hypothesis, and thus confirm the research hypothesis

2- Presentation and analysis of the results of the first sub-hypothesis:

H0: There is no statistically significant relationship between academic achievement and comprehension and recognition in children on the autism spectrum at a significance level of  $\alpha=0.05$ .

H1: There is a statistically significant relationship between academic achievement and comprehension and recognition in children on the autism spectrum at a significance level of  $\alpha=0.05$ .

Table 10: Shows the relationship between academic achievement and comprehension and recognition in children on the autism spectrum

Comprehension and recognition

Academic achievement Spearman's correlation coefficient  $r$  0.789

p-value 0.001

Sample size 5

The results in the table show that the correlation coefficient between academic achievement and comprehension and recognition is 0.789, indicating a strong positive correlation; thus, a change in academic achievement is accompanied by a change in comprehension and recognition as well. Furthermore, the correlation is statistically significant at a p-value of 0.001, as this is lower than the significance level  $\alpha = 0.05$ . Consequently, we reject the null hypothesis, accept the alternative hypothesis, and thus confirm the research hypothesis.

3. Presentation and analysis of the results for the second sub-hypothesis:

H0: There is no statistically significant relationship between academic achievement and verbal imitation in children on the autism spectrum at a significance level of  $\alpha=0.05$ .

H1: There is a statistically significant relationship between academic achievement and verbal imitation in children on the autism spectrum at a significance level of  $\alpha=0.05$ .

Table 11: Shows the relationship between academic achievement and verbal imitation in children on the autism spectrum

Verbal imitation

Academic achievement Spearman's correlation coefficient  $r$  0.777

Significance value p-value 0.001

Sample size 5

The results in the table show that the correlation coefficient between academic achievement and verbal imitation is 0.777, indicating a strong positive correlation; thus, a change in academic

achievement is accompanied by a change in verbal imitation as well. Furthermore, the correlation is statistically significant at a p-value of 0.001, as this is lower than the significance level  $\alpha = 0.05$ . Consequently, we reject the null hypothesis, accept the alternative hypothesis, and thus confirm the research hypothesis.

4. Presentation and analysis of the results of the third sub-hypothesis:

H0: There is no statistically significant relationship between academic achievement and expression and naming in children on the autism spectrum at a significance level of  $\alpha = 0.05$ .

H1: There is a statistically significant relationship between academic achievement and expression and naming in children on the autism spectrum at a significance level of  $\alpha=0.05$ .

Table 12: Shows the relationship between academic achievement and expressive and naming skills in children on the autism spectrum

Expressive and naming skills

Academic achievement Spearman's correlation coefficient  $r$  0.727

Significance value p-value 0.001

Sample size 5

The results in the table show that the correlation coefficient between academic achievement and expression and naming is 0.727, indicating a strong positive correlation; thus, a change in academic achievement is accompanied by a change in expression and naming as well. Furthermore, the correlation is statistically significant at a p-value of 0.001, as this is lower than the significance level  $\alpha = 0.05$ . Consequently, we reject the null hypothesis, accept the alternative hypothesis, and thus confirm the research hypothesis.

### 3. Interpretation of the study's hypothesis results:

- Interpretation of the results of the first sub-hypothesis:

Based on the results of testing the study's hypothesis, which states that there are statistically significant differences between recognition and comprehension skills and academic achievement among children with autism who are integrated into mainstream education.

This can be explained by the fact that children with higher recognition and comprehension skills are better able to follow lessons and absorb information, which has a positive impact on their grades and academic performance. A child's acquisition of recognition skills—that is, their ability to distinguish and understand words and sentences at a basic level—directly influences their ability to follow and comprehend the curriculum, and likewise, their acquisition of comprehension skills—that is, their ability to absorb and analyse texts more deeply—enables them to excel in academic tasks that require comprehensive, precise analysis and understanding. This suggests that enhancing recognition and comprehension skills can contribute to improving the academic achievement of children with autism, as confirmed by the study by Harris & Handelman (2014) entitled:

"Improving Comprehension Skills in Children with Autism Through Structured Teaching "

This study aimed to evaluate the impact of training programmes on recognition and comprehension on the academic achievement of children with autism integrated into mainstream classrooms. The sample comprised 40 children aged between 7 and 12 years, and intensive training programmes were provided to improve their recognition and comprehension skills. The results showed that the children who participated in the training programmes demonstrated significant improvement in their recognition and comprehension abilities, which had a positive impact on their academic performance, particularly in reading and reading comprehension. The findings of this study confirm the results we reached in our study, namely that improving the recognition and comprehension skills of children

with autism who are integrated into mainstream education has a positive impact on their academic achievement.

- Interpretation of the results of the second sub-hypothesis:

Based on the results of testing the study hypothesis, which states that there are statistically significant differences between verbal imitation skills and academic achievement among integrated children with autism.

This can be explained by the fact that children with higher verbal imitation skills achieve better academic performance. This includes the child's ability to repeat the sounds, words and sentences they hear. It is considered a fundamental skill for the development of language and communication skills. Children with good verbal imitation skills are able to learn and understand new words more quickly, making it easier for them to follow and comprehend the curriculum. This is considered a preliminary step in the development of other language skills, such as comprehension and expression, which are essential for good academic achievement. Evidence suggests that enhancing verbal imitation skills contributes to improved academic achievement in children with autism, as confirmed by the study by Ingersoll & Schreibman (2006) entitled:

“Teaching Imitation Skills to Young Children with Autism Using a Naturalistic Approach”

This study focused on analysing the impact of training in verbal imitation skills on the academic achievement of children with autism integrated into mainstream schools. The study involved 30 children aged between 6 and 10 years, and verbal imitation techniques were used as part of the educational programmes. The results showed that training in verbal imitation skills led to a marked improvement in the children's language abilities and an increase in their academic grades, particularly in language and mathematics. The findings of this study confirm the results we reached in our own study, namely that verbal imitation skills have a significant impact on the academic achievement of children with autism integrated into mainstream schools. Improving this skill can lead to marked improvements in academic performance.

- Interpretation of the results of the third sub-hypothesis:

Based on the results of the study's hypothesis, which states that there are statistically significant differences between expressive and naming skills and academic achievement among children with autism who are integrated into mainstream schools.

This can be explained by the fact that children with higher expression and naming skills are able to communicate more effectively, which helps them to absorb lessons and understand instructions better. A child's acquisition of expressive skills—which includes the ability to express thoughts and feelings clearly, whether orally or in writing—as well as naming skills—which include the ability to correctly name objects, people and places, reflecting the child's understanding of language and its correct use—as expression and naming skills are fundamental to the development of other language skills such as comprehension and oral communication, and are essential for good academic achievement. This suggests that enhancing expressive and naming skills can contribute to improving the academic achievement of children with autism, as confirmed by the study by Paul & Norbury (2012) entitled:

“Language Interventions for Children with Autism: The Role of Expressive Language Training”

The aim of this study was to evaluate the impact of verbal expression skills training programmes on the academic performance of children with autism. The sample comprised 50 children aged between 5 and 11 years, and training programmes were implemented to improve verbal expression skills. The results showed that children who received training in expressive language skills demonstrated a marked improvement in their verbal communication, which contributed to increased interaction in

the classroom and improved academic performance. Similarly, the study by Charlop, Christy & Carpenter (2000) entitled:

“Teaching Children with Autism to Label Emotions: Effects on Emotional Knowledge and Academic Performance”

which aimed to analyse the impact of labelling skills training on the academic achievement of children with autism. The sample comprised 35 children aged between 6 and 12 years, and training programmes were implemented to improve labelling skills. The results showed that training in labelling skills led to a marked improvement in the children’s ability to label objects and events, which helped them improve their academic performance, particularly in subjects requiring strong verbal communication skills such as science and language. The findings of these studies confirm the results we reached in our study, namely that improving expressive and naming skills in children with autism who are in mainstream education has a positive impact on their academic achievement.

- Interpretation of the general hypothesis:

Based on the results of testing the study hypothesis, which states that there is a relationship between verbal communication and academic achievement among children with autism in mainstream settings.

This can be explained by the fact that children with good verbal communication skills are better able to follow lessons and understand instructions, which contributes to improving their academic performance. The child’s acquisition of verbal communication skills, which include oral expression, recognition, comprehension, naming and verbal imitation, helps them to interact with teachers and peers and understand the subject matter. Good verbal communication enhances the development of other language skills such as reading and writing, which are essential for good academic achievement. This suggests that enhancing verbal communication skills contributes significantly to improving the academic achievement of children with autism, as confirmed by a study by Johnson & Green (2017) entitled:

“Verbal Communication Skills and Academic Achievement in Inclusive Classrooms for Children with Autism”

which investigated the relationship between the level of verbal communication skills and academic achievement among children with autism integrated into mainstream classrooms. The sample comprised 50 children aged between 7 and 14 years. The study used standardised measures to assess verbal communication skills and academic achievement. It found that children with better verbal communication skills achieved higher scores in academic tests, were more engaged in classroom activities, and were less prone to social isolation.

Similarly, the study by Brown & White (2018) entitled

“Language Support Programs and Their Impact on Academic Success for Children with Autism”

aimed to evaluate the effectiveness of language support programmes in schools and their impact on the academic performance of children with autism. The sample comprised 40 children who were provided with language support programmes for a full academic year. The results of this study showed that the language support provided in schools helped to improve the children’s verbal communication skills, leading to an increase in their academic achievement across all subjects, including science and mathematics. The findings of these studies corroborate the conclusions reached in our study that improving the verbal communication skills of children with autism in mainstream settings has a significant positive impact on their academic achievement.

#### **4. General conclusion:**

Through this study, we have concluded that the main hypothesis in this context is that there is a statistically significant relationship between verbal communication and academic achievement among children on the autism spectrum. A statistically significant relationship means that there is an effect between the factors under study that is not considered coincidental or random.

When the significance level ( $\alpha$ ) is 0.05, this means that there is only a 5% chance that the observed result occurred by chance; this is considered a low significance level and is a standard value used to determine whether a relationship is statistically significant.

If there is a statistically significant relationship between verbal communication and academic achievement in children on the autism spectrum, there may be several explanations:

1. **The effect of verbal communication on academic achievement**: This may mean that a child's ability to communicate verbally directly influences their academic achievement; effective communication may contribute to understanding academic concepts and active participation in the learning process.
2. **The effect of academic achievement on verbal communication**: It is possible that high academic achievement acts as a catalyst for increased verbal communication, as academic excellence may lead to increased self-confidence and, consequently, the individual's ability to communicate effectively.
3. **Other factors**: There may be factors other than the variables under study that influence this relationship, such as treatments used for autism spectrum disorder, family support, or even the school environment.

In general, there may be a relationship between verbal communication and academic achievement in children on the autism spectrum for many reasons, highlighting the importance of directing attention and support towards developing these children's communication skills to improve their academic performance.

Analysing the relationship between verbal communication and academic achievement in children on the autism spectrum through variables such as autism severity, school integration, psychological support, and educational support can help us understand the more complex dynamics and interactions between these factors. Here is a possible explanation of how these variables might influence outcomes:

1. **Severity of autism**:
  - The severity of autism may have a significant impact on the relationship between verbal communication and academic achievement. It is possible that children with severe autism face greater challenges in verbal communication and consequently in academic achievement, whilst those with milder autism may have greater opportunities for improvement in these two areas.
2. **School inclusion**:
  - School inclusion can have a significant impact on a child with autism's experience at school and, consequently, on their verbal communication and academic achievement. If a child is effectively included in the classroom environment and receives the necessary support, this may have a positive impact on their ability to communicate and their academic performance.
3. **Psychological counselling**:
  - Psychological counselling may play an important role in developing verbal communication skills and improving academic achievement for children with autism. For example, counselling sessions can help boost self-confidence and cope with the challenges children may face in the school environment.

4. **Speech and language therapy**:

- Speech and language therapy may have a positive impact on verbal communication skills and academic achievement. Such interventions may help reduce psychological stress and increase concentration and attention, which can contribute to improved academic performance and verbal communication.

Overall, analysing the relationship between these variables provides a deeper understanding of how various factors influence verbal communication and academic achievement in children on the autism spectrum, and can help identify effective strategies to support the development of these skills and improve academic performance.

**Conclusion:**

In light of the results obtained from this study, in which the Verbal Communication Skills Scale with its three dimensions was administered to a sample of school-integrated children with autism, the results obtained from testing and accepting the study's hypothesis can be attributed to a significant and noticeable positive improvement in the academic achievement of school-integrated children with autism, as they underwent a comprehensive programme comprising behaviour modification skills implemented by a psychologist, as well as skills and activities for language development implemented by a speech and language therapist, and an educational programme delivered by a specialist teacher within these classes, taking into account the individuality of each child or case in terms of intellectual, cognitive and linguistic abilities. On the other hand, this marked improvement can also be attributed to the inclusion process itself, as this process provides direct contact with peers within the class in particular, and indirect contact with peers within the school in general. This enables them to learn through imitation, which in turn contributes to language development through observational learning. These findings support the conclusions of previous studies, which confirmed a positive relationship between verbal communication and academic achievement among school-integrated children with autism. Improving verbal communication skills through specialised interventions and ongoing support from the educational environment can lead to improved academic achievement and increased integration of these children into mainstream schools

**References for the study:**

- brown & white, j. (2018). language support programs and their impact on academic success for children with autism. *autism: the international journal of research and practice*.
- charlop-christy & carpenter, m. (2000). teaching children with autism to label emotions: effect on emotional knowledge and academic performance. *journal of applied behavior analysis*.
- harris & handleman, j. (2014). improving comprehension skills in children with autism through structured teaching. *journal of autism and developmental disorders*.
- ingersoll & schreibman, l. (2006). teaching imitation skills to young children with autism using a naturalistic approach. *journal of positive behavior interventions*.
- jhonson & green, h. (2017). verbal communication skills and academic achievement in inclusive classrooms for children with autism. *research in autism spectrum disorders*.
- paul & norbury, c. (2012). language interventions for children with autism: the role of expressive language training. *international journal of language & communication disorders*.

ملحق رقم (1): مقياس مهارة التواصل اللفظي عند الأطفال ذوي اضطرابات التوحد.

لا يحدث مطلقا	يحدث أحيانا	يحدث دائما	العبارة	الرقم	<p><b>أولاً:</b> مهارة التعرف و الفهم. و يقصد بها فهم الطفل و تعرفه على المعاني و الأسماء</p>
			يتعرف الطفل على اسمه.	1.	
			يتعرف الطفل على بعض زملائه.	2.	
			يتعرف الطفل على بعض الحيوانات.	3.	
			يتعرف الطفل على أجزاء جسمه.	4.	
			يتعرف الطفل على بعض أنواع الخضراوات.	5.	
			يتعرف الطفل على بعض أنواع الفاكهة.	6.	
			يتعرف الطفل على الملابس.	7.	
			يتعرف الطفل على الألوان الأساسية الأحمر والأصفر والأزرق والأخضر.	8.	
			يفهم الطفل استخدام الأشياء "في واش تأكل؟", "في واش تشرب؟"	9.	
			يفهم الطفل الأوامر مثل (أعطيني الكرة).	10.	
			يفهم الطفل الإيماءات "نعم, لا"	11.	
			يفهم الطفل كلمتي "خذ, هات"	12.	
			يتعرف الطفل على الأصوات ويفهمها (صوت واحد يغني، صوت قطار، صوت المكنسة)	13.	
			يتعرف الطفل على بعض الأشياء (مفتاح - كرة - قلم رصاص - بالونة - قطعة عملة.)	14.	

لا يحدث مطلقا	يحدث أحيانا	يحدث دائما	العبارة	الرقم	<p><b>ثانياً:</b> مهارة التقليد اللفظي. و يقصد بها قدرة الطفل على تقليد الأصوات و الكلمات.</p>
			يقلد الطفل أصوات غير كلامية (نشر, طرقة).	1.	
			يقلد الطفل أصوات كلامية (بيب - هيه).	2.	
			يقلد الطفل أصوات الكلمات التي يسمعها.	3.	
			يكرر الطفل أصوات لأنغام معروفة (أغنية أطفال مشهورة)	4.	
			يقلد الطفل أصوات الحيوانات أو صوت شيء معين مثل السيارة.	5.	
			يكرر الطفل بعض الكلمات بعد أن يقولها شخص آخر.	6.	
			يقلد الطفل حركات الشفاه والفم عندما يطلب منه.	7.	
			يتمكن الطفل من نطق بعض المقاطع والكلمات البسيطة.	8.	
			يقلد الطفل نطق الكلمات.	9.	

			يتعرف الطفل على الأصوات ويقلدها (دقات الباب - دقات الساعة - جرس التليفون... وما إلى ذلك)	10.	
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لا يحدث مطلقا	يحدث أحيانا	يحدث دائما	العبرة	الرقم	
			يذكر الطفل اسمه.	1.	
			يذكر الطفل اسم أمه.	2.	
			يرد الطفل بكلمة "نعم" على من يناديه	3.	
			يستخدم الطفل كلمة (شكر - العفو).	4.	
			يرد الطفل بطريقة مناسبة على من يسأله "واش راك" ؟ (الحمد لله)	5.	
			يسمي الطفل بعض الحيوانات.	6.	
			يسمي الطفل بعض أجزاء جسمه عند الإشارة إليها .	7.	
			يسمي الطفل بعض أنواع الخضراوات.	8.	
			يسمي الطفل بعض أنواع الفاكهة.	9.	
			يسمي الطفل بعض قطع الملابس.	10.	
			يسمي الطفل عددا من الألوان الأساسية مثل الأحمر والأصفر والأخضر والأزرق واخضر	11.	
			يجيب الطفل عن سؤال "شكون هادي"؟ (بالإشارة إلى أم الطفل).	12.	
			يجيب الطفل عن الأسئلة التي تكون إجابتها كلمة واحدة مثل "واش راك لابس في رجلك"؟ "واش دير بالبسكويت"؟	13.	
			باستخدام كلمات "أه" و"لا". يعبر الطفل	14.	
			يذكر الطفل كلمة باي للوداع.	15.	
			يسمي الطفل ما يفضله كاستجابة لسؤال ("واش تحوس؟").	16.	
			يسمي الطفل الشيء الذي يفضله بمفرده.	17.	
			يذكر أسماء بعض الأشياء (مفتاح - كرة - قلم رصاص - بالونة - قطعة عملة).	18.	

**ثالثا:**  
مهارة التعبير و التسمية.  
و يقصد بها قدرة الطفل على التعبير و إعطاء المسميات.