Using Teaching Activities for Developing Some Receptive Language Skills determined in the light of The (ABLLS-R) at children with Autism Spectrum Disorder Integrated in Primary Schools

BY

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Abstract

        The research aimed at investigating the effect of using teaching activities for developing some receptive language skills determined in the light of The ABLLS-R at children with Autism Spectrum Disorder (ASD) integrated in primary schools. The research employed a one group pre-posttest design. Subjects were (18) male and female second year primary school pupils with autism spectrum disorder at Assuit City. The experiment lasted for one academic semester. Tools of the research included: (1) a set of teaching activities, (2) a receptive language skills checklist, (3) an observation sheet of receptive language skills and (4) a receptive language sub-skills test. Mean scores and standard deviation for students' scores in the observation sheet were calculated to determine students' level in receptive language skills and were found to be low. Wilcoxon signed-rank test of paired samples was used to reveal significance of differences between means of ranks of the study group scores in the pre and the post implementation of the receptive language sub-skills test. Analysis of data indicated significantly better post gains. The research concluded that the proposed teaching activities had a positive effect in developing receptive language skills at primary school children with ASD.

Key Words: Teaching Activities-Receptive Language Skills- The ABLLS-R - Integrated Children-Autism Spectrum Disorder

استخدام الأنشطة التدريسية في تنمية بعض مهارات اللغة الاستقبالية المحددة في ضوء (The ABLLS-R) لدى أطفال اضطراب طيف التوحد المدمجين بالمدارس الابتدائية

إعـداد

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ملخص البحث

هدف البحث الحالي إلى استكشاف اثر استخدام الأنشطة التدريسية في تنمية بعض مهارات اللغة الاستقبالية المحددة في ضوء تقييم المهارات اللغوية والتعلمية (ABLLS-R) لدى أطفال اضطراب طيف التوحد المدمجين بالمدارس الابتدائية. تبني البحث الحالي تصميم المجموعة الواحدة ذات الاختبار القبلي والبعدي. اشتملت مجموعة البحث علي (١٨) تلميذ و تلميذه بالصف الثاني الابتدائي من ذوي اضطراب طيف التوحد المدمجين بمدرسة الزهراء بمدينة أسيوط. تمثلت أدوات البحث في: (١) مجموعه من الأنشطة التدريسية، (٢) قائمـه بمهارات اللغة الاستقبالية، (٣) بطاقة ملاحظه مهارات اللغة الاستقبالية المدركة من المعلم، (٤) اختبار مهارات اللغة الاستقبالية الفرعية. استغرق تطبيق البحث فصـلا دراسيا كاملا. ولتحديد مستوي الطلاب مجموعة البحث في مهارات اللغة الاستقبالية تم حساب متوسط الدرجات والانحراف المعياري لدرجات الطلاب في بطاقة ملاحظه مهارات اللغة الاستقبالية. وقد أظهرت النتائج ضعف في مستوي الطلاب مجموعة البحث في مهارات اللغة الاستقبالية. تم استخدام اختبار ويلكوكسون للعينات المرتبطـة للكشف عن دلالـة الفروق بين متوسطي رتب درجات مجموعـة الدراسة في القياسين القبلي والبعدي لاختبار مهارات اللغة الاستقبالية. وقد أظهرت النتائج وجود تحسن فالقياس البعدي لأداء التلاميذ مجموعة البحث. لخص البحث إلى أن استخدام الأنشطة التدريسية لـه تأثير ايجابي علي تنمية بعض مهارات اللغة الاستقبالية لدى أطفال اضطراب طيف التوحد المدمجين بالمدارس الابتدائية.

الكلمـات المفتاحيـة: الأنشطة التدريسيـة– مهارات اللغة الاستقبالية– تقييم المهارات اللغوية والتعلمية (The - ABLLS-R) اضطراب طيف التوحد– الأطفال المدمجين

Introduction and Research Problem :
Introduction:

        It is indisputable that education plays a significant role in the life of every person. So, parity in education must be strengthened and supported in order to emphasize the importance of meeting the needs of all students whether they are typical or with special needs.

        The United Nations Program for People with Special Needs focused on the rights of those people and highlighted the importance of recognizing their needs and prerogatives in public education. Receiving basic education is the right of every individual in Egypt between the ages of 6 and 15. Interest in children with special needs, specifically those diagnosed with autism, has greatly increased recently. Lately, Egypt has been more interested in the inclusion of children with special needs in public education. Moreover, many parents prefer to enroll their children at regular schools to be educated with other mainstream pupils as they believe that school is a main institution for the development of all children including those with Autism Spectrum Disorder (ASD).

        Autism is a permanent developmental disorder that affects the way a person communicates with and connects to other people (Hojjati & Khalikhaneh, 2014). The increasing dominance of ASD, currently estimated 1 in 68, gives an upward challenge to researchers, family, providers of services as well as autistic diagnosed children (Malkin et al., 2016). Autism is considered a complex learning disorder that has greater prevalence than before as the number of children identified in the past years has increased which makes early recognition and intervention a fundamental issue (Ramaa, 2008). It has been declared that reported autism cases is largely due to changes in diagnostic techniques, referral patterns, services accessibility, raising in public awareness as well as age at diagnosis (Maitreya, 2011).

        Designing and using teaching activities is a crucial part of any successful, organized and constructive curriculum. Teaching activities refer to things teachers do to help their pupils gain better understanding of the content being explained. Teaching activities help learners acquire multiple skills and play more active role in learning. They help enrich the teaching and learning process within classroom as they provide learners with opportunities to strengthen their learning by applying what they have learnt inside and outside the classroom. Teaching activities are meant to decrease the probability of facing common difficulties

associated with the receptive language development especially at children with ASD (LaMarca & LaMarca, 2018).

As children with ASD often have developmental delays in their receptive language, so they require extra instruction along with well-prepared teaching activities to help them acquire necessary receptive language skills suitable for their age level. Besides, it is crucial to keep in mind that autistic children learn better through using activities that are repetitive, simple, structured and predictable (Charman et al., 2003 a; Fulton & D'Entermont, 2013; Luyster et al., 2007).

Administering skills assessment and providing teachers with the appropriate activities for educating children with ASD is extremely important and will be a need for many practitioners. Guldberg (2010) stressed the importance of using thorough and careful assessment at children with ASD and of making subsequent interventions in order to meet their special needs. She added that in order to identify the significant difference at children with ASD, in skills, behavior and intellect; a comprehensive skills assessment should be applied together with the use of effective developmentally suitable teaching activities and tracking of individuals' progress over time to increase ideal learning and development. Grow and LeBlanc (2013) stressed that if instructional activities and procedures for teaching receptive language skills are not perfect or suitable, many problems may emerge and might slow the rate of skill acquisition and development. In the same vein Nasri et al., (2010) maintained that assessment is a part of the teaching and learning process that attempts to bring improvement in the quality of education.

Literature revealed that many children with ASD exhibit a global language disorder and that some of them have had never acquired functional language (Charman et al., 2003 a; Hudry et al., 2010; Luyster et al., 2008). In addition, many researchers reported that the language skills of children with ASD can be unevenly developed as their language abilities may follow atypical pattern of development in which receptive ability is more impaired than the expressive one which implies an unusual growth and trajectory in language skills among children with ASD highlighting the need for intervention with suitable instructional activities (Pickles et al., 2014; Charman et al., 2003 b; Hudry et al., 2010; Luyster et al., 2008; Manolitsi & Botting, 2011).

Receptive language refers to the thinking process involved in hearing, processing and comprehending spoken language. It also refers to

the learner's ability to respond to the language of another person. This general category skill is taught often in early intervention. The reason why it is so common is that not only because our receptive language is a good part of our functional language but also it is very useful for teaching things such as following basic instructions, teaching children how to identify items in their environment, or teaching them to identify different functions of items.

Receptive language impairment is identified by difficulties with comprehending written language. It is continuously in need of development even for children who have some strength in this skill area (Partington, 2010). The process of developing receptive language is very complex; as before children start producing words, they learn to recognize the human voice then, they start segmenting the sounds they hear and associate meaning to these sounds. This process of hearing the sounds of language in everyday interaction together with gaining meaning from visual information inside the child's environment provides the basis of the language comprehension (Leaf & McEchin, 1999). Alberta (2003) maintained that autistic students usually have a problem in understanding verbal information, following long verbal instructions, or recalling a series of instructions. He stressed that when teaching children with ASD, teachers should be sure that they are being attentive, imitating what they hear or see and understanding common words and instructions.

Several studies have reported that young children with ASD are delayed in their receptive language development. (Charman et al., 2003 a; Fulton & D'Entermont, 2013; Luyster et al., 2007; Maljaars et al., 2011; Miniscalco et al., 2012; Vanvuchelen et al., 2011). Though, reviewing literature revealed a large gap in studies on receptive language in general (Gillum & Camarate, 2004; Law, Garrett & Nye, 2004; Clarke & Collins, 2007) whereas an exclusive focus on expressive language development has been noticed (Law, Garrett & Nye, 2004).

Muller and Brady (2016) maintained that language assessment plays a great role in the diagnosis as well as remedy of autism spectrum disorder because language impairments are often a part of an ASD diagnosis, moreover, language status is a main indicator of future outcomes for individuals with ASD. They stressed that information got from language assessment should also be used to create therapy goals and regulate progress on these goals.

Receptive language assessment evaluates children's understanding of spoken language including understanding of different vocabulary words, instructions, range of sentence structures and abstract language (Ibrahimagic et al., 2017). It also helps specifying levels of language delay at the part of children. Further, information gained from assessment can aid individual therapy programs and may also help teachers, parents, as well as primary caregivers of children with ASD to best adjust their language to aid child's comprehension. Maljaars et al., (2012) reported that all children with ASD demonstrated significant delays in receptive language abilities. They stressed that their assessment should include language measurements in order to deduce strengths and weaknesses and thus adjust intervention targets to individual needs.

Song et al., (2014) have declared that children with ASD show atypicality in various domains in language one of which is receptive vocabulary. Receptive language is composed of many sub- skills that are closely linked to cognitive and physical skills. If any of those sub-skills is weak or slow to develop, this will reduce the child's overall language skills or rate of development in comprehension skills (Hojjati & Khalilkhaneh, 2014). Receptive language disorder is diagnosed at the time that a child with ASD does not show the ability to comprehend the appropriate vocabulary for his/her age, follow instructions, identif**y** basic action words, identify letters' names and sounds, recognize words' beginning and end sounds, sort objects according to properties, or identify basic concepts.

The Assessment of Basic Language and Learning Skills- Revised (ABLLS-R) is a common criterion –referenced assessment tool that gives a complete overview of several essential skills and might prove to be a useful means for measuring skills development and in forming educational programing (Partington, 2010). Data gained from applying The ABLLS-R can ease the process of specifying developmentally appropriate teaching objectives for children with ASD (Partington et al., 2018). Pioneer researchers have identified The ABLLS-R as being an important resource and a skill tracking system that can guide parents and language teachers in teaching language and learning skills to children with ASD (Aman et al., 2004; American Medical Association, 2014; Schwartz etal., 2001; Thompson, 2011). Therefore, it is vital for school administrators and teachers to identify elements that accelerate and

facilitate learning at children with ASD based on deficiency in skills identified after administering The ABLLS-R assessment.

To sum up, it might be useful to assess autistic children's level on receptive language skills in order to determine the skills that need intervention and thus to provide a number of teaching activities that are designed and directed to develop delayed skills at children with ASD.

Background and Research Problem :

Though language ability normally develops automatically, it does not progress naturally for a large number of children. Generally, children with ASD show impairment in language development, mainly in receptive language (Tager-Flusberg et al., 2005; Eigsti , 2011). Children with ASD usually have understanding difficulties that make them face a challenge to follow instructions at home or at school, and accordingly cannot respond to questions or requests. They might also have problems in following directions, understanding gestures, identifying different objects, or recognizing basic concepts.

Receptive language is considered a major and necessary skill for children with ASD; however, literature revealed that it has received less attention than required. Grow and LeBlanc (2013) have stressed that if receptive language skills are not readily acquired, a child misses various important learning opportunities causing delays in overall development and in subsequent acquisition of spoken language.

Despite recognizing the importance of developing receptive language skills in general and for children with ASD in particular, reviewing literature has revealed that very limited studies have been conducted concerning assessment of receptive language skills at autistic children. In addition, little attention has been given to systematic development of these skills. Moreover, in most studies conducted in this area, the participants were English native speakers. It has also been recognized that very limited studies, up to the researcher's knowledge, have been conducted in Arab countries dealing with assessing and developing receptive language skills at autistic children.

Hence, it became necessary to identify autistic children's receptive language skills in the light of The ABLLS-R and then assess children's level on these skills to determine the ones need to be developed and to provide teachers with teaching activities that might help children become more capable of comprehending language.

Throughout many years of supervising teaching practices at different primary schools in Assuit City, it has been observed that children with ASD integrated at regular schools, lack necessary receptive language skills which consequently hinder their comprehension ability. Children with ASD showed problem in receiving and comprehending age-appropriate vocabulary words, compared to their typical class mates, for instance; they exhibited significant impairments in the ability to receptively identify items by feature or class. They also faced difficulties in matching objects with pictures that express them and in creating categories of concepts. A significant less in knowledge of letters' names and sounds has also been noticed.

It has also been observed that teachers are not provided with suitable teaching activities that meet the actual needs of children with ASD. Muller and Brady (2016) revealed that children with ASD have specific deficits in receptive language and that such defects are largely ignored in interventions as focus is directed to developing expressive language. Hannant (2018) advocated that autistic children scored significantly lower in receptive language than typically developing children. In line with this, Hudry et al., (2010) found that children with ASD have atypical pattern of receptive language vocabulary. Similarly, Charman et al., (2003 a) maintained that children with ASD had an overall delay in vocabulary and that their receptive vocabulary is highly impaired.

Reviewing literature revealed importance of building up autistic children's receptive language skills so that they can associate meaning to words. This can be achieved through using different teaching activities that model new vocabulary terms and concepts.

In order to specify the receptive language skills second year primary stage pupils lack, an observation sheet for assessing receptive language skills at children with ASD, has been designed and applied to a group of primary stage pupils with ASD. Piloting the observation sheet revealed great impairment in different receptive language skills at primary stage children with ASD.

To conclude, children with ASD at primary stage were found to lack necessary receptive language skills which may affect their ability to comprehend and learn the language. This brought to light the need to use suitable teaching activities that focus exclusively on developing these skills at autistic children.

Statement of the Problem :

      Primary stage children with ASD integrated in regular schools lack necessary receptive language skills. Moreover, in the light of the results of many studies that showed autistic children's impairment in receptive language skills together with results of the pilot study, the present study intends to construct and apply some teaching activities and to investigate their effect on developing receptive language skills at children with ASD.

Research Questions :

1. What is the level of receptive language skills at children with ASD integrated in primary schools?
2. What is the effect of using teaching activities in developing receptive language skills at children with ASD integrated in primary schools?

Research Objectives :

      The present research has aimed at:

1. Specifying the level of receptive language skills at children with ASD integrated in primary schools.
2. Developing receptive language skills at children with ASD integrated in primary schools by using some suggested teaching activities.

Significance of the Study :

      The present study might be significant in the following:

1. Findings obtained from this study might provide a discrete contribution to the assessment literature and can benefit those who teach language skills to autistic children.
2. The present study is one of very few studies, up to the researcher's knowledge, dealt with developing receptive language skills at children with ASD as most studies are focused on expressive language skills.
3. It would provide English teachers with several teaching activities that might be beneficial in increasing the level of autistic children's receptive language skills.
4. It would provide EFL teachers of children with ASD with a workable receptive language skills test.

Research Delimitations :

The present research is limited to the following:

1. Second year primary stage children with ASD integrated in Alzhraa school, Assuit city.
2. The experiment lasted for (17) sessions distributed over (8) weeks (4) sessions a week each lasting for (110) minutes. Thus, the total instruction was (32) hours.
3. The suggested teaching activities aimed at developing a number of receptive language skills at primary stage pupils with ASD. The skills were chosen on the basis of reviewing literature together with results obtained from applying the receptive language skills observation sheet.

According to the jury opinions together with observation sheet results the main receptive language skills deemed appropriate for primary stage children with ASD were:

a. Identifying letters' names and sounds.
b. Recognizing beginning and ending letters' names and sounds in given words.
c. Sorting objects based on properties (color, shape, composition, size or class).
d. Identifying different community helpers' tools and workplaces.
e. Identifying basic concepts (location. number, description, feelings, and size).
f. Identifying basic action words.

Research Terminology :

To facilitate reading and understanding the research, the following definitions are presented:

a. Teaching activities:

Smaldino et al., (2015) define teaching activities as activities required for students to achieve meaningful understanding, retention, application and practice with feedback.

For the specific purposes of the present study the term teaching activities has been used to refer to "activities designed for teaching children with ASD in accordance with specific objectives to promote and facilitate learning and to help teachers meet the diverse learning needs of those children. They refer to interventions made to help children with ASD practice and acquire necessary receptive language skills through

engaging them in active intentional and fun procedures. They are characterized by being repetitive, simple and structured".

b. Receptive language skills:

Kulman (2015) defines receptive language skills as those that refer to the child's ability to cognitively process and understand verbal language. Receptive language relies on receptive vocabulary and the ability to interpret spoken language.

The present study defines receptive language skills as "the skills that enable a child to understand read or received language as; identifying basic action words, identifying letters' names and sounds, recognizing beginning and ending letters' names and sounds in given words, sorting objects based on properties, identifying different community helpers, together with their tools and workplaces and identifying basic concepts".

c. Integrated children:

According to Ford (2013) integration refers to the practice of including students with disabilities alongside with other students in a regular classroom.

The present study uses the term integrated children to refer to "children with ASD who are included in regular education classrooms and educated in the same environment as typically developing children with suitable support facilities".

d. Children with ASD:

For the specific research purposes here the term children with ASD used to refer to those children who show significant impairment in understanding receptive language and who lack necessary receptive language skills typically developing children master.

e. The ABLLS-R:

Blanco (2019) defines The ABLLS-R as an assessment, curriculum guide, and skills tracking system. It focuses on early language acquisition, verbal behavior, and very early learning concepts and readiness skills. The language skills and other basic skills that are tracked by this tool are those that are acquired by most typically developing children.

In this study The ABLLS-R is used to mean "a tool that the researcher used to guide in specifying the receptive language skills that need to be assessed at primary stage children with ASD and then to develop such skills through intensive instruction ".

Research Hypotheses:

1. Receptive language skills at children with ASD are below the level.
2. There would be a statistically significant difference between the mean scores of the pupils on the pre-posttest of receptive language skills favoring the post application.

Research Procedures:

To answer the research questions, the following procedures were adopted:

1. Reviewing the pertinent research and literature related to receptive language skills, autistic children and the ABLLS-R
2. Introducing a theoretical background dealing with receptive language skills, autistic children. as well as the ABLLS-R.
3. Developing a checklist of receptive language sub-skills in its preliminary form in the light of literature review.
4. Administering the list to jury members to check which ones are appropriate and which ones are not needed if any.
5. Making suitable amendments in the checklist of skills based on the jury's recommendations and suggestions, then setting the list in its final form.
6. Administering the checklist to a number of teachers to determine the importance of each skill together with its suitability to primary stage pupils with ASD.
7. Developing the observation sheet of Receptive Language Skills in view of that, and then presenting it to jury members for amendments.
8. Making amendments in the observation sheet in the light of the jury's recommendations then setting the observation sheet in its final form.
9. Piloting the observation sheet of Receptive Language Skills to measure its' validity, reliability and duration.
10. Administering the observation sheet of Receptive Language Skills.
11. Determining a final list of receptive language skills in the light of the observation sheet results.
12. Analyzing the content of the English language course book "Connect Primary2" for specifying the vocabulary words and use when designing teaching activities.
13. Designing the teaching activities aimed to develop receptive language skills at children with ASD, teachers' Guide and Students' Book.
14. Building the Receptive Language Skills Test.

15. Piloting the Test and some parts of the teaching activities on a group of children to measure their validity, reliability and duration. Jury members found that some test questions and some teaching activities are difficult and not suitable for group of the study. In the light of their suggestions some items and activities were modified or substituted and others were deleted. The jury members agreed that the final form of the test and the teaching activities were valid.
16. Administering the Receptive Language Skills Test (pre-testing) to assess autistic children's level in receptive language skills.
17. Implementing the teaching activities to group of the research.
18. Administering the Receptive Language Skills Test (post-testing) to measure the effect of the suggested teaching activities.
19. Analyzing the data statistically.
20. Discussing the results obtained and providing recommendations.

Theoretical Background and Review of Literature :
Receptive Language Skills:

Receptive language refers to how an individual understands and processes language. Lovaas (2003) defines receptive language as nonverbal response to others' verbal stimuli. It involves comprehension of heard or read language. Hojjati & Khalilkhaneh (2014) maintained that receptive language implies the ability to understand what people say, what is written down, along with comprehending signed language. It refers to comprehension of language in all its forms.

There are two kinds of receptive language skills important for children with ASD. The first kind relies on something called "simple discrimination". It comes in a form of; (a) vocal instruction, and might also be visual as well, (b) particular non-vocal response (behavior) and (c) delivered reinforcers (praise). (Kaminski & Machado, 2019 ; LaMarca & LaMarca, 2018). Examples of receptive language skills that involve simple discriminations are; teaching a child to respond to his name or to look when asked to or to follow simple instructions. The other kind of receptive language skills is called "auditory conditional discrimination". It is a little bit more complex than simple discrimination. It can be described as follows; "(a) an array of comparison stimuli, with (b) a corresponding auditory instruction that occasions the (c) selection of the appropriate picture / object from the array (behavior) that is followed by (d) a reinforcer (consequence)". (Grow & LeBlanc, 2013:58). Examples of receptive language skills

based on auditory conditional discrimination are; asking children to identify items based on their names, basic features, comparative features, categories and utilities.

Building up children's receptive language skills through using different teaching activities together with modeling vocabulary terms and concepts is extremely important and essential for helping children associate meaning to words. Receptive language intervention programs should mostly focus on expanding children's vocabulary base. Kuzma (2008) maintained that building receptive e language skills might expand children's vocabulary size as vocabulary concepts aid children's comprehension of directions, locations, numbers, quantity, position, sequence, attributes, size as well as dimension which are necessary receptive skills for autistic children.

A number of recent studies have maintained that individuals with ASD often demonstrate atypical profiles of receptive language as compared to typically developing children. Researchers have advocated that impairments in language comprehension is well established in autistic children (Muller & Brady, 2016; Ellis Weismer, Lord & Esler, 2010; Hudry et al., 2010). In line with this, Gupta & Singhal (2009) studied the development of language and learning skills in 20 children with autism compared to 20 matched controls using The Behavioral Language Assessment and The ABLLS-R. Results revealed that the development of language and learning skills was significantly below that of typically developing children. The authors reported that these findings have implications for assessment, evaluation practices as well as designing of intervention programs for children with ASD. Luyster et al., (2008) and Kjelgaard & Tager-Fasherg (2001) found comparatively greater impairments in comprehension over production skills at children with ASD. Literature has revealed that if children did not acquire basic receptive language skills, they might miss various learning opportunities and thus cause delay in their overall development as well as in acquisition of spoken language (Guldberg, 2010).

Hudry et al., (2010) examined relative delay in receptive and expressive language at a sample of preschoolers with autism. Results showed that the language ability of children with autism was lower than typical age norms. In a similar vein, Charmen et al., (2003) and Luyster et al., (2007) reached the result that children with ASD did not show better performance in receptive language than expressive language, but

the gap between receptive and expressive language was much smaller than in typically developing children of similar development levels.

Studies have indicated also that though autistic children might have certain defects in receptive language, such defects are highly ignored in intervention programs for children with ASD (Muller & Braaldy, 2016; Ellis Weismer, Lord & Esler , 2010; Hudry et al., 2010). Pelios & Sucharzewski (2004) maintained that their electronic literature review has revealed that receptive language training at children with ASD has received far less attention. Moreover, teachers are receiving little guidance from administration regarding how to teach receptive language to children with ASD to address skill defects. This highlights the necessity of assessing autistic children's level in receptive language skills to use gained information when designing teaching activities that works on developing these skills at the part of children with ASD. Hence, it became necessary to provide teachers with teaching activities that might help raising autistic children's level in receptive language skills.

Autistic children:

In (1943) LeoKonner distinguished autism from childhood schizophrenia and identified it as an official clinical disorder. (Center for Disease Control and Prevention, 2015). Autism spectrum disorder refers to a developmental disability exists in the first years of life with prominent defects in social interaction and communication and is characterized by limited, repetitive behavior patterns, interests, or activities. (American Psychiatric Association (APA), 2013; Center for Disease Control and Prevention, 2015). Degree of severity of these symptoms might vary in each child (Mastergeorge, 2007) so that no two autistic children have exactly the same educational needs (American Psychiatric Association, 2000; Goldstein & Behuniak, 2012).

Children with ASD do not process information the same way as typical children do. Some autistic children are visual thinkers, they learn through pictures instead of words, others learn better through sound, while some more learn best through touch. Consequently, teachers need to adopt teaching activities that address different senses and help integrate children with ASD in the learning process. For teaching activities to be effective in instructing children with ASD teachers should; support verbal explanation with visual, provide children with opportunities to practice and rehearse, include tasks that children can

participate in and accomplish independently, provide required assistance, build in flexible timelines for tasks engagement and completion, divide large activities to smaller sections,   match materials to children's readiness level and interest and use different question types such as completion, multiple choice, drawing or pointing to correct answer (A Resource Guide, 2007 & Ripple, 2020).

Children with ASD have been reported to experience early delays in language (Dale, Price & Bishop, 2003; Ellis Weismer, Lord & Ester, 2010) and also have limited lexical semantic knowledge letter (Boucher & Mayes, 2012; McGeorge et al., 2012). It has been stressed by different researchers that children with ASD struggle with comprehension (Williamson et al., 2014; AcCardo, 2015). Typical children generally understand words before being able to use them in speech, whereas children with ASD mostly show impairments in language comprehension and use of receptive language skills (Charman et al., 2003a; Luyster et al., 2007, 2008; Paul et al., 2007). They have more trouble discovering relational meaning than typically developing children. Parish-Morris (2011) observed that only few number of autistic children master the relational terms (verbs and prepositions) that are essential part of a sentence. In addition, autistic children have a problem with understanding basic concepts as this requires skills and knowledge of linguistics as well as cognitive demands. Reviewing literature revealed also that autistic children showed significant impairment in receptively identifying items by feature, function or class. Moreover, they were unable to match objects, designs, and pictures to a sample which indicates a problem in forming categories of concepts and in comprehending the link among objects.

Children with ASD have also been reported to lack knowledge of letter and number (Gupta and Singhal, 2009). Hence, it became clear that children with ASD exhibit severe problems in comprehending receptive language which highlights the need for gaining better understanding of such language impairment and consequently designing suitable teaching activities to develop such skills and to eliminate delay at the part of children with ASD. In their study, Luyster et al., (2008) found relatively greater impairment in comprehension over production skills in toddlers and children with ASD.

Assessment of Basic Language and Learning Skills- Revised Program (ABLLS-R):

The Assessment is the basis of creating suitable and effective interventions. The ABLLS-R is one of the most common assessment tools used with autistic children (Blanco, 2019). The ABLLS was available ten years ago and has just been revised and updated recently. It provides a thorough review of 544 skills related to 25 skill areas including social interaction, self-help, academic and motor skills most typically developing children acquire before entering kindergarten. Tasks range from simpler to more complex ones within each skill (Partington, 2010; Blanco, 2019).

The ABLLS-R is an assessment tool, curriculum guide, and a skill tracking system used to guide the teaching of language and critical skills to children with ASD or other developmental disorders. It measures developmentally delayed children's language and functional skills specifically children with ASD disorder (Behavior Analysis, Inc, 2014; Webster, 2015). It is based upon standard referenced set of skills that can signify child's recent repertoire and then track its progressive development. It helps parents and teachers in specifying the skills that need intervention at language delayed children (Partington, 2010). It facilitates the determination of skills children need to effectively communicate and learn from daily experiences (Usry, 2015).

The ABLLS-R focuses mainly on early language acquisition, early learning of concepts, verbal behavior as well as readiness skills. It has a significant role that guides the designing of programs for teaching children with language defects. The general aim of The ABLLS-R is to provide a precise summarization of child's skills so as to facilitate the destining of an accurate and significant treatment program for children with ASD.

Shteyat and Al-Oweidi (2018) investigated the effectiveness of The ABLLS-R in improving basic skills for Jordanian children with ASD. She used The ABLLS-R Basic Skills Assessment Test as pre- post assessment. The results showed that there were apparent differences between the mean scores in favor of the post measurement demonstrating the effectiveness of The ABLLS-R in improving the basic skills of Jordanian sample of children with ASD.

Schultz (2003) examined using The ABLLS-R with three English language learners in elementary public school setting to identify its'

usefulness for teachers and students. Results showed that The ABLLS could be used for English language learners and teachers generally liked assessment information.

To conclude, The ABLLS-R is an assessment tool used to specify the main areas that need intensive instruction at children with ASD and thus direct curriculum designers to design teaching activities that develop the content of educational programs to suit needs of children with ASD.

Material and Methods:

1. The Experimental Design:

The present research used a pre-post experimental group design. The research group was exposed to pre and post means of getting data. The research used only one group. The group of the research included eighteen (18) second year primary stage pupils with ASD. This design was chosen to evaluate the impact of the suggested teaching activities on second year primary stage pupils with ASD by comparing their performance before and after using the suggested teaching activities.

2. Group of the Research:

a. The Pilot Group:

A group of fifty second year primary school pupils with ASD, at a number of primary schools in Assuit city were randomly selected to participate in the pilot study to evaluate the effectiveness of the suggested teaching activities, and tools of the research.

b. The Main Group:

Eighteen second year primary school pupils with ASD at Alzhraa primary school in Assuit city were randomly selected and participated in the study.

3. Tools of the Research:

   a. The suggested Teaching Activities (Teacher's Guide and Students' book).
   b. A Receptive Language Skills Checklist.
   c. The Observation Sheet of Receptive Language Skills Perceived from Teachers.
   d. The Receptive Language Sub-Skills Test.

a. The suggested Teaching Activities (Teacher's Guide and Students' Book):

I. The teachers' guide and students' book were intended to develop some receptive language skills at primary school pupils with ASD. The proposed Teaching Activities were divided into six units. Each unit

deals with a receptive language skill, begins with a general objective and branches out into a number of behavioral objectives. Unit one deals with identifying letters' names and sounds. Unit two deals with recognizing beginning and ending letters' names and sounds in given words. Unit three focuses on sorting objects based on properties. Unit four deals with identifying different community helpers' tools and workplaces. Unit five focuses on identifying basic concepts (location. number, description, feelings, and size). Unit six focuses on identifying basic action words.

2. **The teachers' guide and students' book included:**
a. The learning objectives for each lesson, materials and time assigned for each lesson.
b. A detailed step-by step instruction on how a lesson can be taught effectively.
c. Teacher's modeling of receptive language skills using different techniques. Then, a guided practice together with an independent practice is provided in each lesson.
d. The lesson ends with evaluation exercises to assess children's progress. A general evaluation is provided by the end of each lesson. Materials of the lessons were adopted from different resources.

3. **Criteria of Selecting the Materials:**

A Resource Guide for Effective Educational Practices for students with ASD (2007) and Denning & Moody (2013) reported that there are certain criteria for selecting the materials that suit children with ASD. Such materials should:
a. Match learners' readiness level, interest and learning profiles.
b. Facilitate the use of the specified receptive language skills.
c. Be simple as well as multi-sensory (sight, sound and touch).
d. Use clear language.
e. Relate to the content of the suggested teaching activities.

4. **Methods used in teaching:**

The independent use of the receptive language skills is preceded by explicit teaching, modeling of each skill by the teacher and guided practice.

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4. Evaluation Techniques:

Two types of evaluation were used in the present research: Formative and Summative evaluation. Formative evaluation is a continuous process during the time of application. It is conducted for the purpose of assessing pupils' progress and providing feedback on their performance. The procedures of formative evaluation consisted of a set of questions given to pupils after each unit to assess their comprehension level.

The second type of evaluation is summative. It is conducted at the end of the experiment taking the form of the post administration of the test to assess pupils' level in receptive language skills.

5. Duration of the experiment:

The experiment lasted for (32) hours, divided into (17) sessions, four sessions a week, (110 minutes) for a session.

6. Instructional aids:
   a. Real objects.
   b. pictures
   c. Word cards.
   d. Magnetic board
   e. Classroom board.

7. Teaching activities included:
   a. Games (e.g., Simon Says- I Spy- Magic Bag game- Occupation Role Play).
   b. Story telling.
   c. Songs.
   d. Sorting and matching activities.

8. Validity of the suggested teaching activities:

To establish the validity of the suggested teaching activities, a copy of the objectives, the activities, the tools and teaching techniques was submitted to a panel of jury to determine the face validity of the teaching activities and to decide on:
   a. Linguistic stating of items.
   b. Appropriateness of the objectives for the subjects.
   c. Academic verification of the content.
   d. Relatedness of the content to the objectives.
   e. Appropriateness of the methodology used in teaching for both content and group of the study.
   f. Appropriateness of the evaluation means for the objectives.

g. Trainability.

The jury members agreed that the teaching activities are valid. They suggested some modifications which were taken into consideration in the final version of the suggested teaching activities.

9. Piloting the suggested Teaching Activities:

Before implementing the suggested activities, the researcher conducted a pilot study that lasted for a month implementing the first two lessons. The pilot study aimed at ensuring the clarity of instructions, suitability of the linguistic level of the material to the subjects and determining the time pupils need to complete each lesson as well as the approximate time needed for teaching all lessons. Tools of the study were also administered to the pilot group.

The Receptive Language Sub-Skills Checklist (prepared by the researcher):

a. Objective of the checklist:

The objective of this checklist was to determine the receptive language skills necessary for primary stage pupils with ASD and to develop the observation sheet of receptive language skills.

b. Sources of the Checklist:

In order to develop the receptive language skills checklist in its initial form, the researcher reviewed studies related to basic receptive language skills in addition to the Assessment of Basic Language and Learning Skills- Revised (ABLLS-R) program. The checklist contained (32) items that represent different receptive language sub-skills.

c. The rating Scale:

The checklist responses were assigned the scores (5-4-3-2-1) to represent the items (strongly agree-agree-undecided-disagree-strongly disagree).

d. Validity of the Checklist:

The initial checklist was designed and submitted to a jury of faculty members to judge its validity. Taking their suggestions into consideration, the final checklist was written after modifying some skills, deleting unnecessary ones and adding others. The final checklist included (32) items.

e. Administration of the Checklist:

The checklist was developed and administered to (30) primary stage teachers working at integrated schools in Assuit city to determine their degree of agreement on the importance of each skill together with

its' suitability to primary stage pupils with ASD. This was done by calculating average weight and percent of agreement as clear in table (1) Appendix (E).

Analyzing results clarified that teachers "strongly agreed" on (23) skills for being necessary and suitable for group of the study. Whereas degree of agreement on skills number (9-16-20- 21- 22- 24- 29- 30-23) was "strongly disagree". Accordingly, such skills have been eliminated. Based on these results, an observation sheet has been developed to determine integrated autistic primary school pupils' level at receptive language skills as the observation sheet included the skills teachers agreed on.

The Observation Sheet of Receptive Language Skills Perceived from Teachers (prepared by the researcher :
a. Designing the Observation Sheet:

Based on the receptive language skills checklist results and review of studies related to receptive language skills, the researcher designed the observation sheet to specify the level of primary school pupils with ASD at receptive language skills.

The observation sheet has been presented to jury members including university teaching staff, inspectors of English, as well as senior teachers to judge the validity of the statements and their appropriateness to the research purpose.

Suggested modifications have been made and the observation sheet has been introduced in its final form. The final version of the observation sheet included (23) statements.

b. The pilot experiment of the Observation Sheet:

The observation sheet was administered to group of second year primary school pupils with ASD (50) in order to recognize the following:
The Validity of the Observation Sheet :
The researcher used the following:
Logical validity:

That was based on following suggestions of a group of experts in the field, and making requested modifications in the light of their directions concerning:
- The suitability of the statements for the purpose of the observation sheet.
- The elimination or modification of any ambiguous or any inappropriate statements.

- The addition of certain statements

Internal Consistency Validity:

The Pearson Correlation Formula was also used to determine the internal consistency of the observation sheet. The correlation between the score of each individual statement and the total score of the observation sheet was determined as found to be acceptable as shown in table (1)

Table (1)

Internal Consistency of the Observation Sheet of Receptive Language Skills

Item	Correlation with total score	Item	Correlation with total score	Item	Correlation with total score
1	0.460**	9	0.354*	17	0.549**
2	0.590**	10	0.519**	18	0.515**
3	0.521**	11	0.589**	19	0.367**
4	0.554**	12	0.381**	20	0.560**
5	0.599**	13	0.362**	21	0.481**
6	0.371**	14	0.422**	22	0.336*
7	0.450**	15	0.418**	23	0.459**
8	0.455**	16	0.574**		

** Significant at (0.01) level, * significant at (0.05) level

The above table showed that all values of correlation coefficient were found to be significant at (0.01) which confirms validity of the internal consistency of statements with the overall observation sheet. This means that the observation sheet is valid.

Reliability of the Observation Sheet :

To assure reliability of the observation sheet of Receptive Language Skills the Cronbach Alpha formula was used. The observation sheet was applied to the pilot group (N=50). Coefficient Alpha is (0.742) which is acceptable:

Significance of the Observation Sheet responses :

The observation sheet responses were assigned the scores (0-1-2-3) to represent the items (poor- acceptable-good- very good).

The Receptive Language Sub-Skills Test (prepared by the researcher):

a. Objective of the Test:

The test is used as a pre-post test to determine whether second year primary school pupils' level in receptive language skills is developed as a result of using suggested teaching activities.

b. Construction of the Test:

The Test consisted of (25) questions that included (99) items to assess primary school pupils' level in receptive language skills.

c. Procedures for designing the Test:

1. Identifying the objectives of the test.
2. Suggesting items of the test and judging them by jury members.
3. Modifying the test according to the jury members' suggestions.
4. Piloting the test to ensure the clarity of instructions, suitability of the linguistic level to the subjects, and to determine the validity, reliability and time limit. Results indicate clarity of instructions and suitability of the test's linguistic level to the subjects. Pupils needed three hours to answer the questions of the test.

d. Validity of the Test:
Internal Consistency Validity:

The Pearson Correlation Formula was also used to determine the internal consistency of the test. It was applied to the pilot study (N=50). The correlation between the score of each individual item and the total score of the skill to which it belongs was determined and was found acceptable as shown in table (2) Appendix(E)

The correlation between the individual items and the total score of the Receptive Language Sub-Skills Test was determined as shown in table (2):

Table (2)

Correlation between Receptive Language Sub-Skills and the total Score of the Test

N	Skills	correlation with test	significance level
1	Identifying letters' names and sounds.	0.539	0.01
2	Recognizing beginning and ending letters' names and sounds in given words.	0.581	0.01
3	Sorting objects based on properties	0.341	0.05
4	Identifying different community helpers' tools and workplaces.	0.431	0.01
5	Identifying basic concepts	0.537	0.01
6	Identifying basic action words.	0.326	0.05

The above table showed that all values of correlation coefficient were found to be more than (0.3) which is significant at (0, 01) and (0.05) level which confirms validity of the internal consistency of items with the overall test. This means that the test is valid.

e. Reliability of the Test:

To assure reliability of the Receptive Language Sub-Skills Test the Cronbach Alpha formula was used. The test was applied to the pilot (N=50). Coefficient Alpha is (0.775) which is acceptable as shown in table (3) Appendix (E).

f. Instructions of the Test:

Test instructions are written in English. They are brief, simple to understand, and free from any possible ambiguity. They contain information about the objective of the test, time allowed to complete the test and how to record the answers. Instructions were translated and explained to group of the study.

g. Scoring the Test:

One score was allotted for each correct answer. The total score of the test is (99).

h. Item Type:

The items of the test are; multiple choice, matching and underlining.

Findings and Discussion :

1. Answering the first research question:

The first research question states "What is the level of receptive language skills at children with ASD integrated in regular primary schools?"

To answer this question, the observation sheet of receptive language skills was administered to a group of second year primary school pupils with ASD. Mean scores and standard deviation for pupils' scores in the observation sheet have been calculated as shown in the following table:

Table (3)
Level of Receptive Language Skills at Primary stage Pupils with ASD

Skills	Mean	Std. Deviation	%	Level	Rank
1	0.44	0.50	14.67%	Low	17
2	0.42	0.50	14.00%	Low	18
3	0.50	0.51	16.67%	Low	14
4	0.36	0.48	12.00%	Low	20
5	0.46	0.50	15.33%	Low	16
6	0.48	0.50	16.00%	Low	15
7	0.50	0.51	16.67%	Low	14r*
8	0.40	0.49	13.33%	Low	19
9	0.52	0.50	17.33%	Low	13
10	0.60	0.49	20.00%	Low	11
11	0.66	0.52	22.00%	Low	9
12	0.78	0.55	26.00%	Low	6
13	0.72	0.54	24.00%	Low	8
14	0.58	0.50	19.33%	Low	12
15	0.60	0.49	20.00%	Low	11r
16	0.50	0.51	16.67%	Low	14r

Table (3)
Cont.

Skills	Mean	Std. Deviation	%	Level	Rank
17	0.74	0.44	24.67%	Low	7
18	0.82	0.39	27.33%	Low	4
19	0.84	0.42	28.00%	Low	3
20	0.94	0.42	31.33%	Low	1
21	0.88	0.44	29.33%	Low	2
22	0.80	0.40	26.67%	Low	5
23	0.62	0.49	20.67%	Low	10
Total	14.16	2.36	20.52%	Low	

r=repeater*

The above table revealed a low level in receptive language skills at primary school pupils with ASD. The mean score was (14.16) with a percentage of (20.52%) from the maximum overall score of the observation sheet. This result coincides with those of many previous studies which reported that children with ASD are delayed in receptive language development (Charman et al., 2003 a; Fulton & D'Entermont, 2013; Luyster et al., 2007; Maljaars et al., 2011; Miniscalco et al., 2012; Vanvuchelen et al., 2011; Hannant 2018).

Analyzing results of applying the observation sheet revealed that primary school pupils with ASD didn't show the ability to comprehend age appropriate vocabulary, follow instructions, identify basic action words, identify letters' names and sounds, recognize words' beginning and end sounds, sort objects according to properties, or identify basic concepts.

Thus the above results stressed the necessity of assessing autistic children's level in receptive language skills in order to determine the skills that need intervention and development and hence highlighted the need for using suitable teaching activities that focus exclusively on developing these skills at autistic children.

2. Answering the second research question:

The second research question states "What is the effect of using teaching activities in developing receptive language skills at children with ASD integrated in regular primary schools?"

To answer this question, Wilcoxon signed-rank test of paired samples was used to reveal significance of differences between means of ranks of the study group's scores in the pre and the post implementation of the Receptive Language Sub-Skills test as shown in the following table:

Table (4)
Results of Wilcoxon signed-rank test of paired samples in the pre-post
implementation of the Receptive Language Skills Test

Variables	Ranks	N	Mean Rank	Sum of Ranks	"z" value	Sig.
Identifying letters' names and sounds.	Negative Ranks	0	0	0	3.73	0.01
	Positive Ranks	18	9.5	171		
	Ties	0				
Recognizing beginning and ending letters' names and sounds in given words.	Negative Ranks	1	2.5	2.5	3.66	0.01
	Positive Ranks	17	9.91	168.5		
	Ties	0				
Sorting objects based on properties	Negative Ranks	0	0	0	3.73	0.01
	Positive Ranks	18	9.5	171		
	Ties	0				
Identifying different community helpers' tools and workplaces.	Negative Ranks	1	1	1	3.59	0.01
	Positive Ranks	16	9.5	152		
	Ties	1				
Identifying basic concepts	Negative Ranks	0	0	0	3.54	0.01
	Positive Ranks	16	8.5	136		
	Ties	2				
Identifying basic action words.	Negative Ranks	0	0	0	3.74	0.01
	Positive Ranks	18	9.5	171		
	Ties	0				
the Receptive Language Sub-Skills Test	Negative Ranks	0	0	0	3.73	0.01
	Positive Ranks	18	9.5	171		
	Ties	0				

The previous table revealed a statistically significant difference at (0.01) level between means of ranks of the study group's scores in the pre and the post measurement of the receptive language sub-skills (Identifying letters' names and sounds, Recognizing beginning and ending letters' names and sounds in given words, Sorting objects based on properties, Identifying different community helpers' tools and workplaces, Identifying basic concepts and Identifying basic action words) favoring the post measurement. The "Z" values were (3.73, 3.66, 3.73, 3.59, 3.54, 3.74).

Figure (1) shows a comparison of means of scores of the study group in the pre and the post application of the receptive language sub-skills test.

Figure (1)

Means of Scores of the Study group in the pre and the post application of the Receptive Language sub-skills Test
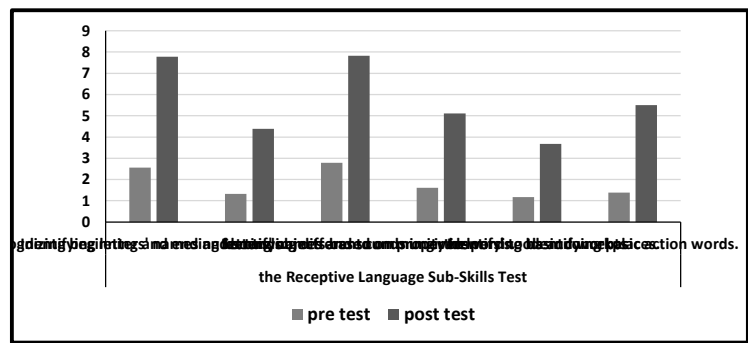
Comparing the results based on the pre-post test basis showed that the pupils achieved a significant degree of improvement in favor of the posttest performance. Mean scores of the pupils on the posttest were significantly higher than those in the pre-test. This affirms that pupils' level in receptive language skills underwent a considerable development as a result of being trained by the suggested teaching activities. Results confirmed that using suggested teaching activities was effective in developing autistic children's receptive language as they help maintain children's focus and attention, increase their engagement in learning, increase class positivity and make children more motivated to learn. This consequently helped children gain better understanding of the content being explained. Moreover, results implied that using teaching activities that made a combination of audio and visual stimuli eased the consolidation of new knowledge and the acquisition of multiple receptive language skills. The use of games, songs, storytelling together with role playing activities required children to pay attention which led them to stay focused on the tasks performed in the classroom during the teaching time and created a sense of happiness and excitement which had a positive effect on developing learners' receptive language skills. According to Cook (2017) children with ASD need some fun classroom

activities as they usually have difficulty with acquiring receptive language skills.

This result coincides with those of many previous studies such as that of LaMarca & LaMarca (2018) who reached the result that teaching activities helped decrease the difficulties associated with receptive language skills mainly at autistic learners. Charman et al., (2003 a) Fulton & D'Entermont, (2013) and Luyster et al., (2007) similarly agreed that using repetitive, simple structured teaching activities can help autistic children learn better.

The above results indicate also an improvement in autistic pupils' vocabulary size as, building receptive language skills through using teaching activities that model different vocabulary terms helps learners to associate meaning to words and thus enlarge their vocabulary size. Kuzma (2008) reached similar results stressing that building receptive language skills can expand children's vocabulary size and thus facilitate their comprehension of directions, locations, numbers, quantity, position, sequence, attributes, size as well as dimension which are considered necessary receptive skills for autistic children. Therefore, it can be concluded that the suggested teaching activities highly affected autistic pupils' level in receptive language skills.

To ensure the effectiveness of using the suggested teaching activities in developing receptive language skills at children with ASD integrated in regular primary schools, Effect size (r) formula and Effect size (d) were used as shown in the following table:

Table (5)
The Effect Size of using the suggested Teaching Activities in Developing Receptive Language Skills at children with ASD Integrated in Regular Primary Schools

Variables	effect size			
	r	D	level	Rank
Identifying letters' names and sounds.	0.622	2.029	Large	2
Recognizing beginning and ending letters' names and sounds in given words.	0.610	1.942	Large	3
Sorting objects based on properties	0.622	2.030	Large	2
Identifying different community helpers' tools and workplaces.	0.599	1.865	Large	4
Identifying basic concepts	0.590	1.809	Large	5
Identifying basic action words	0.623	2.036	Large	1
the Receptive Language Sub-Skills Test	0.621	2.023	Large	

It is evident from the previous table that the effect size values were large for all receptive language skills as well as for overall test score. It has also been noticed that the skill of "identifying basic action words" took the first rank while the skills of "identifying letters' names and sounds" and "sorting objects based on properties" came in the second rank. The skill of "recognizing beginning and ending letters' names and sounds in given words" took the third rank. Then the skill of "identifying different community helpers' tools and workplaces" came in the fourth rank. Whereas the skill of "identifying basic concepts" ranked last.

Recommendations:
1. Designing effective teaching activities for developing expressive language skills at autistic children.
2. Providing a teachers' guide for implementing the suggested teaching activities when teaching children with ASD.
3. Using assessment reached information to aid parents and teachers on how best to adjust their language to aid autistic children's comprehension.
4. Developing teachers' awareness and familiarity with the necessary and needed receptive language skills for children with ASD.

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