

Building Reading Skills in Junior Schoolchildren with Autism Spectrum Disorders in the Context of Inclusive Education

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Abstract

The aim of the research is to identify the peculiarities of building reading skills in junior schoolchildren with ASD. The study involved the use of parent questionnaire survey to confirm the diagnosis of ASD (the Social Communication Questionnaire, SCQ), diagnosis of reading skills (the Standardized Assessment of the Reading Skills (SARS), Test of Operational Units of Reading), analysis of statistics from official sources. The study showed that the reading skills of children with ASD range mostly within the normative limits, but there are some children with low values. It was established that there are significant differences between the components of the reading skills of children with ASD and children with normative development for the parameters of reading comprehension (M = 4.2, SD = 1.4, t≤0.01), reading speed (M = 3.7, SD = 1.6, $t \le 0.05$), the method of reading (M= 6.4, SD = 1.9, t≤0.05) and the index of operational units of reading (M = 5.5, SD = 1.8, $t \le 0.01$). It was found that there is a correlation between the degree of manifestation of ASD in junior schoolchildren and their reading skills. The higher the manifestations of violations, the lower the indicators of reading skills. The study found that children with ASD have normatively developed reading skills at the level of their peers, but reading speed and reading comprehension are more difficult for them. Severe concomitant manifestations of ASD negatively affect the development of reading skills, which requires special conditions for the development of reading skills in children with ASD. The obtained results can contribute to the development of a programme of support for children with ASD at the level of school inclusive education with the involvement of relevant specialists in order to more fully include them in the educational space and ensure the development of a high level of the reading skills.

Keywords:

Inclusion, Autism, Normative Development, Stereotypical Behaviour, Social Communication



Introduction

The modern development of the educational system is characterized by an active search for ways to optimize and harmonize the educational process of children. First of all, this applies to children who have certain developmental peculiarities and need special support and the availability of technical teaching and learning aids. Inclusive education is designed to achieve this goal, which provides for non-discrimination of schoolchildren and the provision of appropriate conditions in the process of obtaining a quality education by children. The main idea of inclusive education is that all children, without exception, have equal opportunities and can get a full education in educational institutions (UNICEF, 2019). Children with ASD, who have specific disorders of speech and communicative interaction, are no exception.

According to the Centers for Disease Control and Prevention (CDC), ASD occurs in all racial, ethnic, and socioeconomic groups and is 4 times more common in boys than in girls (Aguiar et al., 2020). Such data confirm that autism is widespread throughout the world and requires a special approach to the education and development of individuals with ASD (Rybchenko, 2015). According to the World Health Organization (2023), ASD is a group of different conditions characterized by certain difficulties in social interaction and communication with others, atypical behaviour patterns, difficulties in changing the type of activity, non-standard reactions (APA, 2013). Manifestations of ASD are variable and have a different degree of expression in a single individual (Åsberg et al., 2008). Some people can live with autism on their own without help. However, there are cases when ASD takes on severe forms and requires active external support.

The majority of children diagnosed with ASD can be included in the main general education system and have all the prerequisites for learning educational material (Fleury et al., 2014; Semenets-Orlova et al. 2022), including reading skills (Davidson et al., 2018). Reading is a key skill in a child's speech activity, which lays the foundations for understanding the received information. Children with ASD show an active interest in the reading process, but sometimes have problems with reading comprehension (Smith et al., 2021).

According to the 2022 study conducted by the INGO Foundation "Child with a Future", the assessment of the state of support for children with ASD is unsatisfactory. Only 8.4% of parents and 17.2% of specialists are satisfied with support for junior grades. Such data indicate the relevance of identifying the peculiarities of the education of children with ASD, including the acquisition of reading skills, and the implementation of more effective methods of inclusive education

of children with ASD ("Child with a Future" Fund for Helping Children with Autism Syndrome, 2022).

Therefore, the aim of the study is to identify the peculiarities of building reading skills in junior schoolchildren with autistic spectrum disorders in the context of inclusive education. The aim involved the fulfilment of the following research objectives:

- 1) carry out a diagnostics of the reliability of the diagnosed ASD in junior schoolchildren by the method of parent questionnaire survey;
- 2) determine the level of reading skills of children with ASD;
- 3) identify the differences in the indicators of reading skills of junior schoolchildren with ASD and children with normative development;
- 4) establish a relationship between the degree of manifestation of disorders of children with ASD and the level of their reading skills.

The research hypothesis is the assumption that there is a relationship between the degree of manifestation of ASD and the reading skills of junior schoolchildren, therefore, the formation of their reading skills should be built according to the degree of derangements caused by ASD.

Literature Review

According to the Ministry of Health of Ukraine, the number of children with ASD increases annually by 30% (Ministry of Education and Science of Ukraine, 2023). At the same time, inclusive education is a priority direction of the modern Ukrainian school education system. Therefore, the problem of realizing the rights to a full school education of children with ASD is quite urgent. According to World Health Organization (2023). ASD is a group of different conditions based on difficulties in social and communicative interaction. The National Institute of Mental Health (2023) defines autism spectrum disorder (ASD) as a neurological disorder that affects relationships with others, communication, and human behaviour (Vale et al., 2022). The American Psychiatric Association (APA) defines autism as a complex developmental condition that includes persistent problems with social communication, restricted interests, and stereotyped behaviours (APA, 2021).

Children with ASD are considered the most difficult category to include in the education system (Höfer et al., 2017). However, schooling is very relevant for them, as it contributes to developing their speech, communication, and behavioural skills (Accardo & Finnegan, 2019). The primary school age is the most valuable in this process, when self-awareness, the

drive to study is formed, and self-control and self-regulation skills are developed (Arciuli & Bailey, 2021).

In the learning process, children with ASD perceive and learn educational material differently depending on the degree of manifestation of autistic disorder and individual peculiarities of the child. Acquiring speech and communication skills of children with ASD is the basis of their interaction with others (Nikonova & Pavlova, 2020). Reading is one of the key speaking competencies that contribute to the understanding of information, the ability to filter it, and its application in everyday life. Children with ASD, in most cases, show a certain interest in reading and can quickly remember what they read but do not understand its content. The strengths of children with ASD are visual perception and good mechanical memory, excessive attention to details (Kljajevic, 2022). At the same time, if teachers use an individual approach to each child with ASD in combination with effective teaching methods and techniques, this ensures the successful development of reading skills in children with ASD (Nally et al., 2018).

When acquiring reading skills, such children have difficulties in the process of combining letters into syllables. Children with ASD can skip letters, replace them, distort them against the background of deficit of attention, spatial thinking, and visual perception (Carlsson, 2019). Increased fatigue and lack of control are also one of the reasons for this type of mistakes. The peculiarities and causes of difficulties in learning to read in children with ASD include omissions of endings, distortion of words or their replacement (Cerga-Pashoja et al., 2019). Children mostly do not understand what they read, their intonation does not correspond to the content of the text, they cannot correlate what they read with the image. Such difficulties lead to a fragmentary understanding of what is read and the inability to outline the main idea (Paynter et al., 2023).

Children with ASD may experience particular difficulties in acquiring reading skills. Given the unique nature of ASD and the associated deficits in social communication, reading performance may vary depending on the level of autism symptoms (Knight et al., 2018). The researchers prove that difficulties in acquiring reading skills in children with ASD, particularly in understanding the material which was read, are associated with limitations in oral language (Ricketts et al., 2013; Davidson et al., 2018). On this ground, many researchers suggest that children with ASD have a hyperlexical profile (Macdonald et al., 2022). That is, they mostly do not understand what they read, despite high reading technique indicators.

To more deeply evaluate the reading skills of children with ASD, it is necessary to better study the features

of the manifestations of ASD and the development of the components of reading skills.

Methods

Research Design

The study was organized in several stages from February 2023 to May 2023, during which the optimal empirical base, the sample of children with ASD, was selected following the set aim and research objectives. The first stage involved selecting diagnostic tools according to the criteria of reliability and compliance with the age periodization of the respondents. The second stage involved the parents' survey to confirm the ASD, reading skills of children with ASD were diagnosed. The third stage provided for the processing of the obtained results, their qualitative and quantitative analysis. The fourth stage involved drawing conclusions and outlining prospects for further research.

An individual approach was used for data collection and analysis, ensuring respondents' maximum openness and voluntary testing. Children with ASD are usually withdrawn and socially inactive. It is possible to diagnose such a child only in a natural, relaxed environment. This involved a joint meeting between the teacher, the parents, and the child. Under such circumstances, children could freely demonstrate their reading skills and pass the proposed tests.

Sampling

The study involved 212 people, including 106 schoolchildren of grades 2-3, aged from 7 to 10 years, among whom 52 have diagnosed ASD and 54 schoolchildren — without ASD. Another part was their parents (106 people), including 88 women and 18 men. In the studied children, autistic spectrum disorder was diagnosed in the period of 3-6 years by specialists according to the International Classification of Diseases (ICD-10). The parents of children with ASD were invited to confirm the diagnosis of ASD. The inclusion criteria for the group of children with ASD were a previous clinically diagnosed ASD, and the exclusion criteria were any other disorders. The criteria for inclusion in the group of children with normative development were the absence of any physical or psychological disorders in the child's development, and the exclusion criteria were, accordingly, certain abnormalities of normative development. Information about children's development was obtained during a conversation with the teacher and parents.

The research was conducted at Kamianets-Podilskyi Lyceum No. 2 named after T.G. Shevchenko, Kamianets-Podilskyi Special School, Kamianets-Podilskyi Lyceum



No. 16, Slavic Secondary School of I-III Levels No. 12, Slavic Special School No. 23.

Methods

The following methods were used for the research. The Social Communication Questionnaire (SCQ) screening diagnostic technique aims to detect and confirm the diagnosis of ASD. SCQ consists of 40 questions. The questionnaire shall be filled out by a parent or guardian and can be used to diagnose people 4 years and older. The obtained results make it possible to confirm the signs of ASD according to the following parameters: stereotypical patterns of behaviour, qualitative communication disorders, qualitative disorders of reciprocal social interaction.

The SMONCH and TOPOCH techniques by O. Kornev and O. Ishimova, adapted by Kiparenko to Ukrainian (Kiparenko & Kremenchutska, 2021), were used to diagnose disorders of reading skills. The Standardized Method of Examination of Reading Skills (SMONCH) determines quantitative and qualitative assessment of reading skills. It is used for children in the age range from 2nd to 6th grade. The number of correctly read words in the first minute is recorded during the study. If the child independently corrects the mistake, the word is considered to be read correctly. Children are invited to read two texts. After reading, the reading technique coefficient of each text is determined (KTCH1 and KTCH2). The method of reading is evaluated: 1 — reading mainly by letters, 2 — gradual transition to reading in syllables, 3 — reading mainly in syllables, 4 — transition to reading in whole words, 5 — reading in whole words, 6 — reading in groups of words. Reading comprehension is determined by 10 questions on the content of the text. The test also assesses reading speed (number of correctly read words in one minute) and assessment of the way of reading (1 — whisper reading, 2 — articulate reading, 3 — silent reading, 4 — automated reading to oneself).

The Test of Operational Units of Reading (TOPOCH) is designed to identify marginal operational units of children's reading. The methodology consists of 6 lists (numbers, letters, syllables consonant-vowel (CV), vowel-consonant (VC), syllables consonant-vowel-consonant (CVC), syllables consonant-consonant-vowel (CCV), words). Each list includes 100 units. The obtained results were compared with normative values, based on which a conclusion was made about the level of development of operational reading units of children with ASD.

For the convenience of calculations, in particular, statistical analysis, the data obtained by the methods of reading diagnostics were recoded into columns on a 10-point scale. Accordingly, 0-3 indicators are below the norm, from 4 to 7 normative values, from 8 to 10 — above the norm. The parametric Student's

t-test for independent samples and the Pearson linear correlation coefficient were used for the purpose of statistical analysis.

Ethical criteria of the research

The research was conducted in accordance with the ethical criteria of the research. Parents of children with ASD were informed about the confidentiality of the test data and the anonymity of the study.

Results

In the institutions selected for the research base, the algorithm for forming reading skills in younger schoolchildren has the following sequential steps (Fig. 1).

Figure 1

Algorithm of formation of reading skills in younger schoolchildren

1. Learning the skills to match the same objects and images.
Gradually, the subjects change to others, and the tasks become more difficult.

2. Learning sorting skills.
After mastering the skill of combining objects and pictures, mastering the skill of sorting simple objects begins.

3. Thematic albums.
With the help of albums, children with ASD master the skills of dividing objects and environmental phenomena. In this way, they train their categorization skills.

4. Learning words as a whole
Unlike normal children, it is better for children with ASD to remember words in their entirety, therefore, at the initial stage of learning reading skills, simple words that are close to them are studied with them (mom, dad, teacher, school).

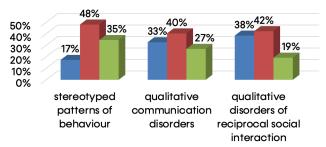
5. Modification and adaptation.
In most cases, it is difficult for children with ASD to master the school curriculum, so the

According to the results of the SQR reading comprehension method, it was established that the diagnosis was confirmed among the examined children with ASD (Figure 2).

relevant material is modified to the needs of such children and maximally adapted to

Figure 2

The indicators of the signs of ASD in the studied junior schoolchildren

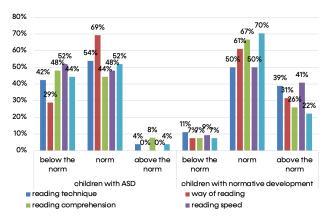


According to Figure 2, 17% of children with ASD have a low level of stereotypical behaviour patterns, 48% have a medium level, and 35% have a high level. Patterns of repetitive behaviour have a negative impact on

learning and social opportunities of children with ASD, their emotional well-being. Repetitive movements or movement disorders prevent the acquisition of writing and speaking skills, make it difficult to move in space. A low level of qualitative communication disorders were found in 33% of children, a medium level — in 40%, and a high level – in 27%. This suggests that almost half of children have communication disorders that negatively affect their interaction with others, reduce educational opportunities, and prevent full adaptive development and inclusion into the educational environment. A low level of qualitative abnormalities of reciprocal social interaction were found in 38%, a medium level — in 42%, and a high level in 19% of children with ASD. Children with a high level are characterized by the inability to make eye contact, adequate facial expressions and gestures in the process of social interaction. This negatively affects the establishment of relationships with peers and educational activities, when the child cannot productively interact with teachers. They need a special approach and longer training than children with a low level.

The next stage was the identification of reading skills in junior schoolchildren with ASD and in junior schoolchildren with normative development. The obtained results indicate certain differences in the development of reading skills of junior schoolchildren (Figure 3).

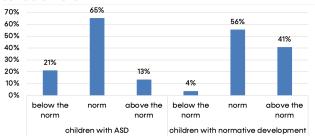
Figure 3 Indicators of reading skills of junior schoolchildren



The figure shows that junior schoolchildren with ASD have normative values of reading technique (54%) and the way of reading (69%), while reading comprehension (48%) and reading speed (52%) are below the norm. In children with normative development, all indicators of reading skills are expressed as normative indicators with a tendency towards indicators above the norm. The obtained results indicate that children with ASD have somewhat less developed reading skills due to the specifics of ASD.

Diagnostics of operational units of reading of junior schoolchildren revealed the predominance of the normative level in both groups of children (Figure 4).

Figure 4
Indicators of operational units of reading of junior schoolchildren



It was found that normative values of operational units of reading prevail in both groups of children. However, in the group of junior schoolchildren with normative development, there are more children with a level above the norm (41%), which indicates a large number of signs that the schoolchildren recognize instantly when reading. This ensures reading speed and understanding of the content of the read text.

The statistical analysis established that there are certain reliable differences in the reading performance of children with ASD and children with normative development (Table 1).

The statistical analysis established that there are reliable differences at a high level of significance in the reading skills of primary schoolchildren with ASD and those with normative development. It was found that children with ASD have lower values of reading comprehension (M = 4.2, SD = 1.4, $t \le 0.01$), reading speed (M = 3.7, SD = 1.6, $t \le 0.05$), the way of reading $(M = 6.4, SD = 1.9, t \le 0.05)$ and the index of operational units of reading (M = 5.5, SD = 1.8, $t \le 0.01$). The obtained values indicate more developed reading skills in junior schoolchildren with normative development than in children with ASD. At the same time, the reading technique of children with ASD is quite normatively developed, as well as the way of reading, but they read more slowly, understand the read information less well, and have lower indicators of reading to oneself than reading aloud.

A correlation analysis was conducted to identify the relationship between the degree of ASD in junior schoolchildren and their reading skills (Table 2).

According to the obtained data, an inverse relationship was found between stereotypical patterns of behaviour of children with ASD and reading technique (r = -0.503, $p \le 0.01$), the way of reading (r = -0.255, $p \le 0.05$), reading speed (r = -0.732, $p \le 0.01$), by the evaluation of the method of reading to oneself (r = -0.718, $p \le 0.01$), as well as a direct relationship with the indicator of operational units of reading (r = 0.357, $p \le 0.05$), r = 0.05



Table 1Comparison of reading skills of children with ASD and children with normative development

Reading performance	Children with ASD (<i>M+SD</i>)	Children with normative development (M+SD)	t
reading technique	5.2±1.2	7.1±2.3	1.3
way of reading	6.2±1.8	6.2±1.8	0.9
reading comprehension	4.2±1.4	7.2±1.9	2.88**
reading speed	3.7±1.6	7.8±1.7	2.55*
assessment of the way of reading	6.4±1.9	6.1±1.1	2.15*
Index of the operational units of reading	5.5±1.8	7.3±1.5	2.91**
Index of the operational units of reading	5.5±1.8	7.3±1.5	2.91**

Table 2Correlational analysis of the relationship between the degree of manifestation of ASD in junior schoolchildren and their reading skills

	Degree of manifestation of ASD		
Components of reading skills	stereotyped patterns of behaviour	qualitative communication disorders	qualitative violations of reciprocal social interaction
reading technique	-0.503**	-0.590**	
way of reading	-0.255*		-0.287*
reading comprehension		-0.523**	-0.455**
reading speed	-0.732**	-0.479**	
assessment of the way of reading	-0.718**	-0.674**	
Index of the operational units of reading	0.357**	-0.261*	-0.381*

^{**.} The correlation is significant at the level of 0.01, *. The correlation is significant at the level of 0.05

0.01). Such relationship indicate that the stereotypical forms of behaviour in children with ASD negatively affects their reading skills, hinders the development of speech activity, prevents them from concentrating on the task.

Qualitative communication disorders negatively correlate with reading technique (r = -0.590, p ≤ 0.01), assessment of reading comprehension (r = -0.523, p ≤ 0.01), the way of reading (r = -0.255, p ≤ 0.05), reading speed (r = -0.732, p ≤ 0.01), assessment of the method of oral reading (r=-0.674, p ≤ 0.01), as well as a direct relationship with the index of operational units of reading (r = 0.357, p ≤ 0.01), reading speed (r = -0.479, p ≤ 0.01), assessment of the method of reading to oneself (r = -0.479, p ≤ 0.01), index of operational units of reading (r = -0.261, p ≤ 0.05).

Such coefficients indicate that qualitative communication disorders do not allow them to fully acquire reading skills (both aloud and to themselves), it is difficult for children to read the text, it is difficult to retell it, to identify its main idea. The number of operational units of reading in such children is significantly reduced, which worsens the reading process.

Qualitative disorders of reciprocal social interaction have a negative relationship with the way of reading $(r = -0.287, p \le 0.05)$, the assessment of reading comprehension $(r = -0.455, p \le 0.01)$, the indicator of operational units of reading $(r = -0.381, p \le 0.05)$. The inability of children with ASD to establish relationships with others negatively affects the level of reading skills in the form of mostly alphabetic reading, the incomprehensibility of the read text, and the low level of operational units of reading.

The study showed that there are differences between the level of reading skills of younger schoolchildren with ASD and children with normative development. It was found that the more severe the manifestation of ASD, the lower the level of reading skills, which requires not only individual pedagogical support, but also active inclusive support.

Since there are currently no specially developed programs for teaching children with ASD in Ukraine, in particular, teaching reading, younger schoolchildren study in inclusive classes according to regular programs. The acquisition of reading skills occurs with the parallel addition or replacement of program tasks with more suitable and effective tasks for each child. Such an inclusive approach ensures a simultaneous

combination of the child's personal development and the assimilation of program standards.

In modern conditions of active digitalization in society, Internet technologies and gadgets are actively used in Ukrainian schools to teach children. Therefore, based on the studied schools, various software products are actively introduced into the work of inclusive classes. They contribute to the more effective formation of reading skills of younger schoolchildren with ASD. Yes, all-inclusive classes are equipped with interactive whiteboards, projectors and laptops. With their help, teachers can use the maximum amount of visualization when teaching reading. Programs such as "Boardmaker" and "Picture communication system", which contain many images for memorization, are also actively used. Pictures, in combination with the name, form the process of memorizing objects and environmental phenomena. Teachers use the Ukrainian-language applications "Leeloo" and "Digital Inclusion". They provide for developing and restoring speech and learning the words of children with ASD. SMART technologies are used, in particular, the "SMART Notebook" editor allows you to create frames with pictures and texts that change shape, which ensures the activation of cognitive activity and the development of reading skills.

Also, teachers use virtual and augmented reality programs (virtual reality, augmented reality, mixed reality), which contribute to the development of impressive speech, a prerequisite for reading skills. Augmented reality programs aim to master reading skills with the help of visualization of the learning process.

Digital and software support of the educational process facilitates the acquisition of reading skills by younger schoolchildren with ASD, making this process interesting, simple and effective.

Discussion

The study found that the majority of children with ASD have medium indicators of stereotypic behaviour patterns, qualitative communication disorders, and reciprocal interaction disorders. On this ground, it can be concluded that children do not have deep disorders due to ASD, they can be integrated into the general education school environment. However, they have expressed difficulties in communication and interaction with others to a certain extent, which prevents them from building relationships with their peers. Junior schoolchildren with ASD have a normative level of the reading technique and the way of reading, which indicates the compliance of these parameters with the normative criteria of the school curriculum.

However, such indicators as reading comprehension and reading speed are below the normative level. Statistically lower indicators of reading comprehension, reading speed, method of reading and the index of operational units of reading were found in children with ASD compared to children with normative development. It was established that children with more severe disorders have lower values on all indicators of reading skills. All this indicates that children with high manifestations of ASD find it difficult to read whole words, they do not have a sufficient number of operative signs, which does not allow realizing the reading process fully. And the more severe the concomitant disorders, the more difficulties may arise in the reading process.

The obtained data correspond to previous studies, which found that children with ASD can have word reading skills along with their peers (Vale et al., 2022), have below-normal reading comprehension indicators (Knight et al., 2018). And the greater their manifestations of social interaction and communication disorders, the higher the difficulties in reading comprehension (Ricketts et al., 2013). It is difficult for such children to find relationships in the text, their reading is more mechanical than conscious, the logical structure of what they read is not followed (Davidson et al., 2018). Even with sufficient technique and method of reading that meet the normative requirements of the programme, correct reading is learned much more slowly than children with normative development (Arciuli & Bailey, 2021).

Children with ASD read more slowly (both aloud and to themselves), may hum or whisper when reading to themselves, do not fully understand the material read, and have a low supply of reading units (Accardo & Finnegan, 2019). Such children need more teacher's attention, a longer period for learning reading skills, special methods for developing reading skills. The researchers proved that there are differences in the reading skills of children with ASD and children with normative development (Åsberg et al., 2008; Tsaras et al., 2018), indicators of the ability to tell a story and listening comprehension (Henry & Solari, 2020).

Solari et al. (2019) also proved the influence of the severity of ASD symptoms on reading skills. However, the difference in their results is that this influence changes over time, just as the manifestations of ASD and the manifestations of reading skills change. In general, the authors noted that the trends to improve reading skills over time are positive.

Children with ASD have "weak central coherence", which indicates their focus on separate words. This makes it difficult to understand the read text on a global level (Randi et al., 2010). That is why their



reading technique is high, and operationalization of concepts and understanding of content are low.

Special pedagogical techniques and methods designed to compensate for existing deficits and increase the effectiveness of the educational process can contribute to the development of reading skills (Chen et al., 2019). When teaching children with ASD to read, it is necessary to rely on the use of visual techniques as a supplement to the text. One of the modern effective methods is the "global reading" technique, that is, reading whole words. Having learned to put together letters or syllables, a child with ASD can read "mechanically" for a long time without understanding what he read (Fleury et al., 2021). The use of the "global reading" technique, which can ensure the establishment of a semantic connection between the word and the picture that denotes it. and thus contribute to the development of such a parameter of reading skills as reading comprehension and increase the level of operational units of reading.

Conclusions

Reading is the basis of communicative interaction, and reading comprehension is an indicator of sustainable development of the individual. Given that children with ASD have speech disorders in many cases, their experience in reading can contribute to consolidation of communication skills, improvement of social interaction, and full inclusion in the educational environment. The obtained data urge the need to implement effective methods of building reading skills of children with ASD developed in accordance with the degree of manifestation of ASD. The results have important consequences for the development of instructions for the development of reading comprehension skills in junior schoolchildren with ASD, which will contribute to the improvement of oral speech and communicative interaction.

For building reading skills of such children in the context of inclusive education, it is recommended to introduce an integrated system that would take into account an individual approach to each student according to his level of manifestation of ASD with the involvement of other specialists. The implementation of the "global reading" method at the level of the main programme of children with normative development will ensure the effectiveness of acquiring the reading skills of junior schoolchildren with ASD.

The presented system of using digital technologies in teaching reading to younger schoolchildren with ASD can be implemented in general school education to form the reading skills of younger schoolchildren with ASD in the conditions of inclusive education. The limitations of the study are the difficulty of combining children with ASD into one research group, as different manifestations of ASD can have an impact

on individual indicators of reading skills, as the study showed, which distorts the overall indicator.

The prospects of further research may be the creation of a programme for building reading skills of junior schoolchildren with ASD in accordance with different degrees of ASD manifestation. As well as the development of instructions for teachers with an emphasis on the use of methods of consolidation and understanding of what has been read. The main thing to study in the future is the effectiveness of using different means of teaching reading to younger schoolchildren with ASD in a specific inclusive environment. Developing a model for using digital information technologies in teaching reading to younger schoolchildren with ASD can be a promising direction for optimizing the inclusive educational space.

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