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THE FORMATION OF THE COHERENT SPEECH OF JUNIOR SCHOOLCHILDREN WITH INTELLECTUAL DISABILITIES BY MEANS OF ANIMATION-BASED THERAPY

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Abstract

The article deals with the problem of the formation of coherent speech of junior schoolchildren with intellectual disabilities affecting the education, development, and socialization of children of this category, and requiring the use of not only conventional but also nontraditional means, of which one is cartoon based or animation-based therapy. The aim of the study is to develop organizational and methodological foundations for the formation of coherent speech of junior schoolchildren with intellectual disabilities by means of animation-based therapy. The study was based on general scientific methods of cognition, such as analysis, synthesis, comparison, generalization; as well as a pedagogical experiment (ascertaining, forming, and control), as well as analysis of empirical data. Methods of mathematical statistics in Excel were used to process the research data. The conducted study allowed tracing the positive dynamics in the formation of coherent speech of junior schoolchildren with intellectual disabilities before and after the experimental work based on the use of animation therapy. The obtained data confirm that the specially organized work within the Young Director children's animation studio effectively contributes to the level of formation of coherent speech of junior schoolchildren with intellectual disabilities by forming a culture of speech; expanding and refining their vocabulary; improving the structure of the sentence; developing the skill of coherent speech based on the demonstration of actions and without visual support; enriching monologic and dialogic forms of speech; as well as contributing to emergence of motivation in communication with peers and adults in the course of creating cartoons. The materials of the article can be useful for specialists and teachers of educational organizations interested in the formation of coherent speech of junior schoolchildren with intellectual disabilities by means of animation-based therapy.

Keywords

Formation – Coherent Speech – Animation-Based Therapy
Junior Schoolchildren with Intellectual Disabilities

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Introduction

The problem of coherent speech formation of junior schoolchildren with intellectual disabilities is one of the most important in special pedagogy and psychology. This is due to the role that speech plays in human life, as the main means of development of cognitive, communicative activities, and a way to achieve successful socialization.

Coherent speech, being the highest and most perfect form of voice interaction of the child with the environment, provides him with the opportunity of holistic perception, reflection, and reproduction of information, which is limited to the specifics of speech underdevelopment of schoolchildren with intellectual disabilities, i.e. by the determined peculiarities of their mental development. Thus, all children with intellectual disabilities have underdeveloped coherent speech that has negative impact on their cognitive development, education, and social integration.

Modern socio-economic changes in society dictate the need to educate a creative active person with the ability to quickly and effectively cope with the difficulties. In this regard, to address issues directly related to the formation and development of coherent speech in junior schoolchildren with intellectual disabilities, it is necessary to use not only traditional but also nontraditional means, one of which is cartoon-creating or animation-based therapy.

In Russia, the Multitherapy social project, which was initiated and coordinated by the Fund named "Support for initiatives in the field of family and childhood "National children's fund", was launched in 2008. Its essence consisted in creating an interregional network of children's animation studios aimed at the rehabilitation and creative socialization of children with disabilities, or those caught up in a difficult life situation, in the course of collective creation of cartoons. Currently, the project "Development of an interregional network of children's animation studios for the dissemination of the model of creative development and socialization of children by innovative means of collective animation activities" is a natural successor of the Multitherapy Project, which develops this line of effort at the state level[1].

Productive implementation of this activity is impossible without high-quality organizational and methodological support. However, in the literature, there are very few scientific and methodological recommendations on the problem of speech development, including the formation of coherent speech by means of cartoon-creating therapy, while the technology of this process in the context of working with children with intellectual disabilities remains completely undeveloped.

The urgency of the problem under consideration determined the purpose of the work, which is developing organizational and methodological foundations of the coherent speech formation of junior schoolchildren with intellectual disabilities by means of cartoon-creating therapy. Data obtained through experimental activities allow confirming the hypothesis that a specially organized Young Director children's animation studio with the use of the cartoon therapy, can contribute to the effective improvement of the level of coherent speech of junior schoolchildren with intellectual disabilities.

[1] International project "MultTerapia", Available at: http://detskiefantazii.ru/psihologia-tvorchestva/proekt-multterapiya.html

The theoretical materials presented in the study complement the data available in the scientific literature on the concerned problem, and the practical significance of the present work lies in the fact that the developed program of Young Director children's animation studio, aimed at the formation of coherent speech in junior schoolchildren with intellectual disabilities, can be used by teachers of educational organizations in their professional activities.

Literature review

The issues of coherent speech development are considered by many teachers from various perspectives (V.V. Baranova, Ya.M. Georieva, B.M. Dzhandar, I.N. Lebedeva, F.K. Urakova, etc.), as well as by psychologists (L.S. Vygotsky, S.L. Rubinshtein, D.B. Elkonin, etc.) and speech therapists (T.V. Bolotova, I.S. Borovik, A.M. Borodich, etc.).

Thus, according to I.N. Lebedeva, a coherent speech should be understood as any unit of speech, whose constituent language components (significant and functional words, and word-groups) are the integral whole organized according to the laws of logic and grammatical structure of the given language[2]. Georieva Ya.M. emphasizes that coherent speech reflects all the child's achievements in language acquisition, in the development of language sound component, the vocabulary and grammatical structure, which is the basic indicator of the level of child's speech development[3]. Dzhandar B.M. believes that coherent speech is not only a sequence of words and sentences, but it is also a sequence of related thoughts, which are expressed by exact words in sentences constructed correctly[4].

Coherent speech in junior schoolchildren with intellectual disabilities is formed lagging behind the neurotypical development and is characterized by qualitative features. Some of them are noted in the research of T.V. Bolotova, I.A. Emelyanova, and R.I. Lalaeva. These concern the late beginning of the coherent speech formation, the slow accumulation of passive and active vocabulary, inadequate assimilation of words meanings, problems of a compilation of the developed stories, and inability to operate a lexeme in independent speech activity[5].

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[2] I. N. Lebedeva, "Associated speech: speech in communication and speech in activity", Special education, num 2 (2011): 88-98. Available at: https://cyberleninka.ru/article/n/svyaznaya-rech-rech-v-obschenii-i-rech-v-deyatelnosti

[3] Ya. M. Gergieva, "Development of coherent written speech: primary school", Bulletin of Adyghe State University, num 2 (2015): 82-86. Available at: https://cyberleninka.ru/article/n/razvitie-svyaznoy-pismennoy-rechi-nachalnaya-shkola

[4] B. M. Dzhandar, "Text as a basis for the formation of oral connected speech", Bulletin of the Adyghe State University, num 1 (2012): 198-204. Available at: https://cyberleninka.ru/article/n/tekst-kak-osnova-dlya-formirovaniya-ustnoy-svyaznoy-rechi

[5] T. V. Bolotova, Logopedic work on the development of coherent speech in younger schoolchildren with intellectual disabilities Development of personality as a strategy of the modern education system: materials of the Intern. scientific-practical (Moscow: Art, 2016); A. Yemelyanova, "Features of communicative skills and ways of their formation in younger schoolchildren with intellectual disabilities", Education and Science, num 1 (2009): 86-94. Available at: https://cyberleninka.ru/article/n/osobennosti-kommunikativnyh-umeniy-i-navykov-i-puti-ih-formirovaniya-u-mladshih-shkolnikov-s-narusheniem-intellekta y R. I. Lalaeva, "Specific features of speech development of mentally retarded schoolchildren", Defectology, num 3 (2003): 29-33.

Borodich A.M., I.S. Borovik, A.V. Tekucheva, Ya.A. Pestrikova, I.Yu. Lebedenko and others suggest using traditional methods and techniques, i.e. visual, verbal, speech patterns, and verbal exercises as means to form coherent speech[6]. However, it should be noted that for this purpose there is a great variety of nontraditional means, of which one is cartoon therapy.

As I.A. Barilyak points out, animation-based therapy is one of the art therapy directions and a kind of cinema art, whose works are created by the frame-by-frame shooting method of successive phases of movement of drawn (graphic or hand-drawn animation) or volumetric (volumetric or puppet animation) objects[7].

In the research of D.I. Sagitova, O.V. Sazhina, T.I. Popova and others, animation-based therapy is presented as a new direction of correctional work, an interesting form of interaction with children challenged by developmental problems. The authors note that this tool allows correction of the child's condition effectively, harmoniously, and naturally[8].

Foreign authors (B. Zrenner, M. Schneider, M. Karsh, F. Hofmann, S. Schmit, etc.) consider the creation of a cartoon as a multidimensional process that incorporates various types of children's activities, namely, speech, gaming, cognitive, visual, musical, etc. In the course of creating a cartoon, schoolchildren acquire important personal qualities such as curiosity, activity, emotional responsiveness, kindness, self-control, as well as develop communication skills, and, most importantly – form coherent speech[9].

Kulikova O.S. believes that cartoon-creating therapy of children with intellectual disabilities contributes to formation of the rudiments of speech; close links are created between action, word, and subject; speech activity in the course of creation of new characters and storylines enhances; as well as the process of keeping attention on objects and speech actions improves[10].

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[6] A. M. Borodich y I. S. Borovik, Modern technologies in the development of coherent speech of younger schoolchildren with intellectual disabilities. Theory and practice of teaching and educating children with disabilities: coll. sci. Art. (Moscow: Academy, 2015); I. S. Borovik, “Logopedic accompaniment of correction of coherent speech of younger schoolchildren with intellectual disability”, Current trends in the development of science and technology, Vol: 6 num 7 (2016): 20-22 y A. V. Tekucheva; Ya. A. Pestrikova y I. Yu. Lebedenko, Features of the formation of skills of coherent speech in children with intellectual disabilities. Special education for children with disabilities: traditions and innovations: Sat. scientific-method. Art. (Armavir: AGPI, 2014).

[7] I. A. Barilyak, “Psychological features of art-therapeutic work with children”, Bulletin of Tver State University, num 1 (2015): 40-46, 2015. Available at: https://elibrary.ru/download/elibrary_23435485_15908944.pdf

[8] O. V. Sazhina y T. I. Popova, Mult-therapy – a new direction in corrective work with children with visual impairment, Actual problems of modern education: experience and innovations: materials of Intern. scientific-practical. Conf. (Moscow: Enlightenment, 2016) y D. I. Sigovatova, “Psychological accompaniment of a child of primary school age with the help of training in multitherapy”, Psychological culture and psychological health of a person in modern socio-cultural conditions, num 4 (2015): 144-146. Available at: https://elibrary.ru/download/elibrary_25660618_62543160.pdf

[9] B. Zrenner; M. Schneider; M. Karch; F. Hofmann; A. Schomig y C. Schmitt, “Animation in therapy: the innovative uses of haptic animation in clinical and community therapeutic practice”, Chronicle of Higher Education, num 15 (2018): 179-187.

[10] O.S. Kulikova, Multterapiya as a means of development of younger schoolchildren with intellectual disability. On some issues and problems of psychology and pedagogy: Sat. Scientific-method. Art. Krasnoyarsk, 2015.

In addition, E.A. Zelinskaya, M.I. Krasnogir, and D.I. Sagitova note that the process of creating an animated film is also a lesson of coherent speech formation. In the course of drawing, playing the plot, and performing practical actions with clay, children are involved in the continuous conversation while describing the main characters, and enriching vocabulary. Such a game organization of children's activities stimulates their speech activity, causes speech imitation, and later forms a real dialogue with toy characters or with adults. In addition, in the course of creating a cartoon, children learn to work on a long-term goal, communicate with peers and adults, accept and understand the role of each team member when working on a common task[11].

Thus, cartoon-creating therapy is a powerful means of forming coherent speech in children with intellectual disabilities. Also, creative activity, when making a cartoon, has a positive effect on the development of cognitive activity, emotional and volitional sphere, it forms the needs and value orientations of the child.

Materials and methods

The study was conducted based on the use of theoretical methods (analysis of psychological and pedagogical research on the studied problem), empirical methods (psychological and pedagogical experiment; modeling of correctional and pedagogical work on the formation of coherent speech by means of cartoon therapy), and data processing methods (quantitative and qualitative analysis).

The first phase of the study consisted in the theoretical analysis of psychological-pedagogical and methodical literature, as well as the elucidation of the essence of the *animation-based therapy* and *coherent speech* concepts, identification of peculiarities of the speech development of junior schoolchildren with intellectual disabilities. At the second stage, the level of coherent speech formation in junior schoolchildren with intellectual disabilities was studied, as well as the content of experimental work on the formation of coherent speech of schoolchildren of this category was developed by means of animation-based therapy. At the third stage, the content of the developed program of the Young Director children's animation studio, aimed at the formation of coherent speech in junior schoolchildren with intellectual disabilities, was tested, and the analysis and interpretation of the research data were conducted along with an assessment of its effectiveness.

Experimental activities were implemented on the basis of State budget educational institution Saransk secondary school for children with disabilities. The control and experimental group consisted of 28 schoolchildren aged 9 to 10 years (fourth-grade schoolchildren) with the medical conclusion of "oligophrenia in the degree of debility" given by the psychological, medical, and pedagogical commission.

[11] D. I. Sigovatova, “Psychological accompaniment of a child of primary school age with the help of training in multitherapy”, Psychological culture and psychological health of a person in modern socio-cultural conditions, num 4 (2015): 144-146. Available at: https://elibrary.ru/download/elibrary_25660618_62543160.pdf; E. A. Zelinskaya, “The effectiveness of the methodology for developing communicative skills of children of primary school age with intellectual disabilities by means of art therapy”, Bulletin of the Chelyabinsk State University, Vol: 4 num 333 (2014): 118-124. Available at: https://cyberleninka.ru/article/n/effektivnost-metodiki-razvitiya-kommunikativnyh-umeniy-detey-mladshego-shkolnogo-vozrasta-s-intellektualnymi-narusheniyami y M. I. Krasnogir, Animated films as a means of speech development of preschool children. Teacher of the new century: the view of a young researcher: materials Vseros. stud. sci. Conf. Mordovians. state. ped. in-t. Saransk. 2013.

Diagnostic tasks proposed by V.P. Glukhov for the examination of the coherent speech status in children with general speech underdevelopment were adapted for the experiment[12]. It should be noted that visual and voice material was selected in accordance with the age of the testees taking into account the specifics of the development of junior schoolchildren with intellectual disabilities. The technique included tasks aimed at identifying the following abilities: making an adequate complete statement at the level of the phrase; establishing logical and semantic relations between objects and expressing them in the form of a complete phrase and statement; reproducing a small and simple literary text; making a coherent story based on the visual content of successive fragments-episodes; conveying their own life experiences using coherent phrasal and monologue speech; making a descriptive story; and using the proposed text and visual material in the preparation of the story. When processing the diagnostic results, the volume of correctly performed tasks and the independence of their execution by the testees were taken into account.

The experimental work on the formation of coherent speech in junior schoolchildren with intellectual disabilities was based on the developed program of the Young Director children's animation studio. The main forms of work of the studio were cartoon-making classes, literary and creative classes, classes in visual activities, animation classes, classes in the "ABC of acting skills and sound".

The process of creating animated films was carried out by junior schoolchildren with intellectual disabilities in several technological stages.

The first stage consisted in the choice of topics aimed at mastering operations of logical thinking and reasoning when choosing topics for future cartoons, manifested in the semantic coherence and consistency of the speech structure elements. Topics were thought out taking into account the interest, intellectual and speech capabilities of schoolchildren, and could be timed to the holidays and anniversaries. Initially, it was found out the extent to which children understood the chosen topic, the presence of strong associations with their life experience. During the conducted discussion, schoolchildren expressed their opinion, trying to argue their own thoughts most accurately and correctly. The second stage was the creation of the script, which included the development of the general concept and idea of the cartoon, as well as images and attitudes of each of the characters. In the course of developing the script, the children jointly selected new words and word-groups for the most accurate and colorful expression of the plot, using comprehensive answers, followed by the description of simple objects, and then transition to the story with simple content and pronounced signs of actions. When creating the script, work was carried out to enrich the speech of junior schoolchildren with intellectual disabilities with a variety of grammatical forms and structures; as well as efforts were undertaken to develop the ability to build different types of phrases, observing their structure and using a variety of types of relationships between sentences and parts of the statement. Besides, the ability of children to clearly build a storyline was improving. The third stage was the photo script, which included a joint analysis of the actions of the cartoon script per individual scenes. Making the layout, the children have imagined how the plot of the cartoon will be clear to future viewers. This contributed to the formation of active speech vocabulary, development of verbal and nonverbal imagination in the course of the creation of cartoon illustrations.

[12] V. P. Glukhov, Diagnostics of development of younger schoolchildren with intellectual disabilities (Orenburg: The Perspective, 2010).

The fourth stage was the production aimed at creating cartoon characters and scenery in various techniques of applied creativity. At this stage, a detailed discussion of the content of each figure or clay-animated character was conducted, the plot of the cartoon was spoken in details, the appearance of the characters was described that contributed to the development of coherent speech in junior schoolchildren with intellectual disabilities.

The fifth stage was sound recording, including the development of diction, working on intonation, and emotional expressiveness of speech. Junior schoolchildren improved phonetic skills, learned to pronounce onomatopoeic words with different intonation and voice power, mastered speech breathing. When voicing the cartoon, the expressiveness of speech was formed – from involuntary emotional to intonational. The role-playing scenario allowed teaching children with speech material of famous fairy tales that concentrated the entire volume of expressive means of the Russian language and provided all opportunities for acquaintance with the rich Russian language culture.

The sixth stage consisted in cartoon film editing carried out by the teacher together with schoolchildren in the special computer software environment. For the development of subjective author's position, the names of children were indicated in the credits to the cartoon.

The seventh stage was viewing and discussing the finished cartoon, highlighting its advantages and disadvantages, drawing conclusions about the conducted work, and building future plans. In the course of the discussion, work was carried out on vocabulary enrichment and development of the connectedness of the statements of junior schoolchildren with intellectual disabilities.

The coherent speech formation system was quite complex. First, everyday vocabulary and motivational phrases of the simplest construction were worked off, thereby providing the filling of elementary communication forms. Gradually lexical material was introduced, necessary for the expression of abstract concepts, while grammatical forms of phrases were complicated. This created a certain basis for the transition from dialogical speech to descriptive and narrative, and further – to the preparation of oral and written coherent texts.

The development of coherent speech among schoolchildren in the classroom was achieved using special techniques aimed at practicing logical sequence in the retelling of events on the subjects of animated movies; displaying the main links in speech; using lexical and grammatical means in the creation of coherent statements when describing cartoon characters; activating vocabulary; using various syntactic means in the formation of coherent statement; creating texts using different functional and semantic types of speech, etc.

In the course of experimental work on the formation of coherent speech in junior schoolchildren with intellectual disabilities by means of animation-based therapy, the following material and technical support was used: a laptop for editing cartoons, voice recorder, microphone, camera, tripod, additional lighting (lamp), table, working places for making crafts, materials to create a background of characters depending on the selected technology: gouache, watercolor, A1, A3, and A4 format paper sheets, or glued in a long strip – for making a moving background (color, velvet, corrugated paper, etc.)., brushes, pencils, markers, oil crayons, plasticine, loose material (sand, cereals, coffee), scarves,

pieces of fabric of different colors and different texture, jewelry, stones, tinsel, ready eyes, small letters, etc.). Also, to create cartoons, special computer programs, namely, Pinnacle Studio, Autodesk Maya, and Toon Boom Harmony were used.

Results

The results of the ascertaining experiment aimed at identifying the level of formation of coherent speech in junior schoolchildren with intellectual disabilities, showed that when performing the task of determining the ability to make an adequate complete statement with respect to the action depicted in the picture, 14.29 and 21.43% of schoolchildren in experimental and control groups, respectively, correctly coped with the task, answering all questions independently and gaining the maximum number of points. However, 21.43% of the schoolchildren of the experimental group and 28.59% of the testees of the control group partially coped with the task, answering most of the questions with the assistance of a teacher, 64.28% of children in the experimental group and 49.98% of children in the control group were unable to complete the task, being able to answer only 1-2 questions with the help of the experimenter.

When performing the task to identify the ability of children to establish logical-semantic relations between objects, only 7.14% of the testees of the experimental group and 7.14% of schoolchildren in the control group constructed sentences correctly, establishing a logical connection between all subjects without the help of an experimenter. The test has shown that 14.29% of the schoolchildren of the experimental group and 21.43 % of the testees of the control group partially coped with the task, establishing a link between only a few objects and expressing them in the form of a complete thought. At that, 78.57% of the testees of the experimental group and 71.43% of the schoolchildren of the control group could not construct sentences and find a logical connection between the objects.

The task to identify the ability to reproduce a small volume of a simple structure literary text showed that only 14.2 % of the testees of the experimental group were able to reproduce the full retelling without guiding questions of the experimenter. At that, 35.73% of the schoolchildren of the experimental group and 21.43% of the testees of the control group were able to retell just half of the text, while 49.98% of the testees of the experimental group and 78.57% of the control group were unable at all to reproduce the listened text.

Performing a task aimed at drawing up a coherent narrative story based on the visual content of the sequential fragments of the episodes has revealed that 7.14% of testees in the experimental group and 14.29% of the schoolchildren in the control group were able to compose their own cohesive plot. Just 7.14% of the schoolchildren of the experimental group and 21.43% of the testees of the control group partially coped with the task. They made a descriptive story on the plot pictures by means of guiding questions of the experimenter. At that, 85.71% of children of the experimental group and 64.28% of the control group were unable to compose a coherent story.

The task to identify the individual level and characteristics of possession of coherent phrasal and monologue speech in the transmission of their life experiences showed that 21.43% of the testees of the experimental group and 14.29% of schoolchildren in the control group were able to make a story about themselves, consisting of 5-6 sentences, gaining the maximum number of points. However, 42.84% of the schoolchildren of the

experimental group and 28.59% of the testees of the control group just partially coped with the task, correctly making a short story consisting of 3-4 sentences with the help of guiding questions of the experimenter. Among testees, 35.73% of children of the experimental group and 57.12% of the control group were unable to make a story about themselves.

When performing the task to identify the ability to make a descriptive story, 14.29% of the testees of the experimental group and 7.14% of the children of the control group were able to independently make a descriptive story consisting of 5-6 sentences. At that, 49.98 % of the schoolchildren of the experimental group and 21.43 % of the testees of the control group have composed correctly a descriptive story, consisting of 3-4 sentences, with the help of guiding questions of the teacher. However, 35.73% of the testees of the experimental group and 71.43% of schoolchildren in the control group were unable to cope with the task.

Performing a task aimed at identifying the ability to use the proposed text and visual material in the preparation of the story, 21.43% of the testees of the experimental group and 14.29% of the schoolchildren of the control group correctly continued the story, consisting of 5-6 sentences. However, 42.84% of the schoolchildren of the experimental group and 28.59% of the testees of the control group were able to compose a story only with the help of guiding questions, consisting of 3-4 sentences. However, 35.73% of the testees of the experimental group and 57.12% of the control group did not cope with the task.

The results of the ascertaining experiment made it possible to conditionally distinguish three differentiated groups of junior schoolchildren with intellectual disabilities depending on the level of formation of coherent speech. This distribution is clearly shown in Fig. 1.

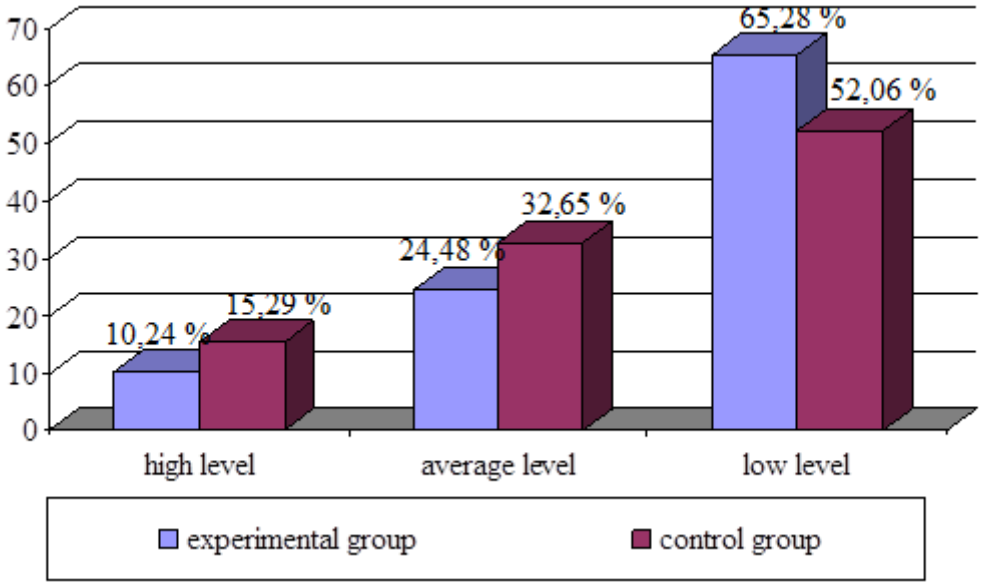

Figure 1
Distribution of junior schoolchildren with intellectual disabilities by groups, depending on the level of formation of coherent speech (following the results of ascertaining experiment)

The results of the control experiment, aimed at identifying the effectiveness of experimental work on the formation of coherent speech of junior schoolchildren with intellectual disabilities by means of animation-based therapy, developed, in particular, by the program of Young Director children's animation studio, have shown that when performing the task aimed at determining the ability to make an adequate complete statement on the action depicted in the picture, 28.59% of the testees of the experimental group and 21.43% of the schoolchildren of the control group correctly and independently answered all the questions asked. However, 49.98% of the schoolchildren of the experimental group and 28.59% of the testees of the control group partially coped with the task. Among testees, 21.43% of schoolchildren in the experimental group and 49.98 % of children in the control group were unable to cope with the task, answering only 1-2 questions with the help of an experimenter. The task aimed at identifying the ability to establish logical and semantic relations between objects and express them in the form of a complete phrase showed that 14.29% of schoolchildren in the experimental group and 7.14% of the testees of the control group correctly constructed the sentences, independently establishing a logical connection between all objects. At that, 28.59% of schoolchildren in the experimental group and 21.43% of the testees in the control group just partially coped with the task, establishing a link between only a few objects, expressing them in the form of a complete thought. However, 57.12% of the testees of the experimental group and 71.43% of the schoolchildren of the control group could not make proposals and find a logical connection between the objects.

When performing the task to identify the ability to reproduce a small volume of the literary text of simple structure, 21.43% of the testees of the experimental group were able to reproduce the full retelling. At that, just 42.84% of the schoolchildren of the experimental group and 28.56% of the testees of the control group were able to retell half of the text; while 35.73% of the testees of the experimental group and 71.43% of the control group were unable to reproduce the text.

The results of the task to compile a coherent story based on the visual content of successive fragments and episodes showed that 14.29% of the testees of the experimental group and 7.14% of the children of control group independently made a coherent story. At the same time, 28.59% of the schoolchildren of the experimental group and 21.43% of the testees of the control group correctly made a descriptive story based on the plot pictures with the help of guiding questions of the experimenter. However, 57.12% of the testees of the experimental group and 71.43% of the children in the control group were unable to complete the task.

Analyzing the task aimed at identifying the individual level and characteristics of possession of coherent phrasal and monologue speech in the expression of their life experiences, it was revealed that 21.43% of the testees of the experimental group and 14.28% of the children of the control group were able to compose a story about themselves, which consisted of 5-6 sentences. at that, 49.98% of schoolchildren of the experimental group and 28.56% of the testees of the control group partially coped with the task, correctly making a short story consisting of 3-4 sentences with the help of questions of the experimenter. at that, 28.59% of the testees of the experimental group and 57.12% of the children of the control group were unable to make a story about themselves.

When performing a task aimed at identifying the ability to make a descriptive story, 14.29% of schoolchildren in the experimental group and 7.14% of schoolchildren in the control group were able to independently create a narrative consisting of 5-6 sentences. At that, 49.98% of schoolchildren in the experimental group and 21.43% of testees in the control group correctly made a descriptive story, consisting of 3-4 sentences taking advantage of guiding questions of the teacher; however, 35.73% of the testees of the experimental group and 71.43% of the children of the control group did not cope with the task.

Analyzing the task to identify the ability to use the proposed text and visual material in the preparation of the story, it was noted that 21.43% of the testees of the experimental group and 14.29% of the schoolchildren of the control group correctly continued the story, consisting of 5-6 sentences. At that, 42.84% of the schoolchildren of the experimental group and 28.59% of the testees of the control group made an incomplete story of 3-4 sentences taking advantage of guiding questions. However, 35.73% of the testees in the experimental group and 57.12% of the children of the control group did not complete the task.

Based on the results of the control experiment, it is possible to identify three differentiated groups of junior schoolchildren with intellectual disabilities, depending on the level of formation of coherent speech.

The first group consists of testees with a high level of formation of coherent speech. Children of this group are able to make the correct complete statement at the level of the phrase, establish logical and semantic relations between objects, and express them in the form of the completed phrase and statement. Besides, they are able to reproduce the literary text small in volume and simple in structure; to compose the coherent subject story on the basis of the visual content of consecutive fragments and episodes; as well as to make the descriptive story.

The second group consists of the schoolchildren with an average level of formation of coherent speech. The speech of the children of this category is characterized by brevity, conciseness of presentation and logical inconsistency; instead of the active deployment of the plot in the story, usually, the story consists of an enumeration of individual elements of the situation.

The third group includes schoolchildren with a low level of formation of coherent speech. They have observed violations of the lexical and grammatical structure of speech, the poor vocabulary; their stories are based on sentences mainly consisting of nouns and everyday verbs. The number of words used in the stories varies from 2 to 13; words are used sometimes inaccurately; a sentence is characterized by a violation of the use of prepositional and case constructions, which are expressed in the omission or the replacement of prepositions, and distortion of word endings.

The distribution of junior schoolchildren with intellectual disabilities by groups depending on the level of formation of coherent speech based on the results of the control experiment is clearly shown in Fig. 2.

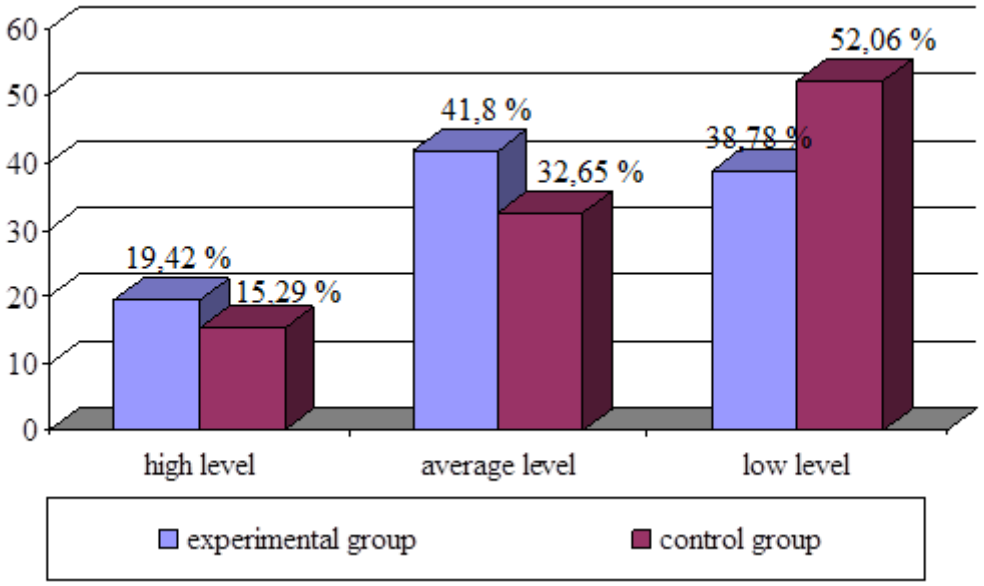

Figure 2
Distribution of junior schoolchildren with intellectual disabilities by groups, depending on the level of formation of coherent speech (following the results of control experiment)

Based on the findings of ascertaining and control experiments conducted before and after experimental work using animation-based therapy, one can trace the positive dynamics in the growth of the level of formation of coherent speech of junior schoolchildren with intellectual disabilities. This analysis shows that the number of children with high and medium levels of intellect in the experimental group has almost doubled, while the number of testees with low intellectual level decreased by half. The studied parameters in the control group remained unchanged.

Discussion

The conducted study was aimed at the development of organizational and methodological aspects of the formation of coherent speech of junior schoolchildren with intellectual disabilities by means of cartoon-creating therapy. The obtained results are consistent with the research of I.S. Borovik, A.M. Borodich, A.V. Tekucheva, Ya.A. Pestrikova, I.Yu. Lebedenko and others[13]. The study shows that coherent speech in children of this category is characterized by certain qualitative features, such as the predominance of question-answering forms in situational speech; the difficulty in expressing the independent statements; and the need for constant stimulation and systematic assistance from the teacher.

Indeed, in the course of experimental work, speech difficulties in children with intellectual disabilities were identified, which were manifested in inadequate completion of

[13] A. M. Borodich e I. S. Borovik, Modern technologies in the development of coherent speech of younger schoolchildren with intellectual disabilities. Theory and practice of teaching and educating children with disabilities: coll. sci. Art. (Moscow: Academy, 2015) y A. V. Tekucheva; Ya. A. Pestrikova y I. Yu. Lebedenko, Features of the formation of skills of coherent speech in children with intellectual disabilities. Special education for children with disabilities: traditions and innovations: Sat. scientific-method. Art. (Armavir: AGPI, 2014).

the statements at the phrase level; the impossibility of establishing the logical-semantic relations between objects, and expressing them in the form of a completed proposition; in a distorted reproduction of even a small volume of the text simple in structure; in errors appearing in the preparation of a coherent narrative story based on the visual content of successive slices of the episodes; in the non-use of coherent phrasal and monologue speech when expressing their life experiences and in the preparation of a narrative; in ignoring the original text and visual material when preparing the story.

The results of the conducted study are consistent with the opinion of I.A. Emelyanova[14], who notes that the features of coherent statements of schoolchildren with intellectual disabilities are largely determined by the nature of the tasks (retelling, story by a series of story pictures, independent story by presentation, etc.). So, during carrying out diagnostic tasks with the use of illustrative materials, the testees used a greater number of words than in independent stories on a given topic. In addition, schoolchildren with intellectual disabilities retold the text, not involving the independent creation of the plot, much easier than creating an independent plot.

The data obtained confirm the conclusions of T.V. Bolotova[15] that in children with intellectual disabilities, the low level of development of coherent speech prevails, and, consequently, the method of correctional and pedagogical work in this direction needs to be improved, including through the use of nontraditional means, such as cartoon-creating therapy.

Conclusion

It should be noted that the issues of coherent speech formation by means of animation-based therapy in Russian science have not been studied. However, as a result of experimental work, the authors have confirmed the hypothesis that a specially organized work in the framework of the Young Director children's animation studio will effectively contribute to improving the level of coherent speech formation in junior schoolchildren with intellectual disabilities by forming a speech culture (correctness, expressiveness, clarity). It will contribute to the expansion and refinement of the vocabulary; improve the structure of the sentences; develop the skill of coherent speech based on the demonstration of actions without visual support; enrich monologic and dialogic forms of speech; initiate motivation in communication with peers and adults in the course of creating cartoons. This statement is illustrated by the results of the ascertaining and control stages of the experiment presented in Figs. 1 and 2. The demonstrated data confirm the validity of the proposed hypothesis. The conducted experimental work, aimed at increasing the level of formation of coherent speech in junior schoolchildren with intellectual disabilities, carried out through the developed program of the Young Director children's animation studio and implemented through the main working forms of the studio, as well as special techniques, aimed at the development of children’s speech, contributed to the change in the indicators characterizing their coherent speech formation.

[14] I. A. Yemelyanova, “Features of communicative skills and ways of their formation in younger schoolchildren with intellectual disabilities”, Education and Science, num 1 (2009): 86-94. Available at: https://cyberleninka.ru/article/n/osobennosti-kommunikativnyh-umeniy-i-navykov-i-puti-ih-formirovaniya-u-mladshih-shkolnikov-s-narusheniem-intellekta

[15] T. V. Bolotova, Logopedic work on the development of coherent speech in younger schoolchildren with intellectual disabilities. Development of personality as a strategy of the modern education system: materials of the Intern. scientific-practical (Moscow: Art, 2016).

The materials of the article can be useful for specialists and teachers of educational organizations interested in the formation of coherent speech in junior schoolchildren with intellectual disabilities through their independent animation-based activities. Opportunities for further research in this area include expanding the range of studied deviations in the development of children with intellectual disabilities and the impact of cartoon-creating therapy on their correction.

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