

UDK 376.352:378.37-053"465.00/.07"

BBK Ч453.091+Ч457

GSNTI 14.29.25

Code VAK 13.00.03

**E. V. Karakulova**

Ekaterinburg, Russia

**LOGOPEDIC WORK ON DEVELOPMENT OF COHERENT  
SPEECH IN PRESCHOOL CHILDREN WITH STRABISMUS AND  
AMBLYOPIA ON THE BASIS OF FORMATION OF PERCEPTION,  
UNDERSTANDING AND REPRODUCTION OF EMOTIONS**

**Abstract.** The existing programs and technologies for overcoming speech disorders in children with functional visual impairments do not sufficiently take into account the peculiarities of their emotional development, whereas speech pathology in children with visual impairments often has a systemic character and is aggravated by immature processes of perception, understanding and use of non-verbal means of communication. The article dwells on the qualitative and quantitative aspects of the results of a study of the lexico-grammatical structure, coherent speech and emotional sphere of children with strabismus and amblyopia, systemic speech underdevelopment and pseudobulbar dysarthria. The results of a summative experiment allowed the author to plan rehabilitation work with the children of the given category throughout one school year. The development of coherent speech was carried out alongside simultaneous rehabilitation of the processes of perception, understanding and reproduction of emotions during frontal logopedic lessons. The author suggests the structure of the lessons on coherent speech development adapted for the given kinds of work. The results of the control experiment have confirmed the effectiveness of the work carried out. The study may be of interest to special education pedagogues.

**Keywords:** preschool children; children with visual impairment; preschool typhlopedagogy; strabismus; amblyopia; speech underdevelopment; coherent speech; children's perception; understanding emotions; reproduction of emotions; logopedic lessons.

**About the author:** Karakulova Elena Viktorovna, Candidate of Pedagogy, Associate Professor.

*Place of employment:* Department of Logopedics and Clinics of Dysontogenesis, Ural State Pedagogical University, Ekaterinburg, Russia.

E-mail: *filatova@uspu.ru*.

## Introduction

It is common knowledge that visual impairments affect the development of all components of speech as a holistic functional system.

The study of active vocabulary of children with visual impairments reveals significant lagging behind the norm manifested in errors while recognizing and calling objects in pictures, in mixing up notions of one and the same lexico-semantic group, problems with choosing antonyms and synonyms, detection of the properties of an object, and in choosing words with a common meaning [5; 11]. Preschoolers with visual impairments demonstrate poor and monotonous verbal vocabulary [2], which leads to violations of the predicative line of the sentence.

Limited vocabulary, inadequate spatial perception and concepts, and reduced volume of verbal memory in children with visual pathology call forth inadequate understanding of prepositions, gender classifiers of objects expressed by personal pronouns in oblique cases, some case inflections and complex logico-grammatical constructions. Preschool children of the given category demonstrate incorrect usage of the grammatical forms of number and case of nouns; person, number and voice of verbs; disagreement of the adjective with the noun in gender, number and case; problems with the

use of prepositional verbs and errors in the usage of prepositions [11].

Underdevelopment of the lexico-grammatical aspect of speech leads, in its turn, to problems in the formation of coherent utterances. Speaking on a topic, children reproduce only part of the material presented, mainly its object-related content, find it difficult to reproduce the dynamics, single out and analyze main events and observe the logic of coherent speech [6; 10; 13].

The specificity of verbal development of children with visual impairments is also manifested in interpretation mistakes and inadequate use of non-verbal means of communication (L. S. Volkova, G. V. Grigor'eva, V. P. Gudonis, V. Z. Deniskina, A. G. Litvak, V. A. Feoktistova, etc.). Coherent utterances of preschool children of this category often lack emotive lexical units [10], whereas understanding and identification of emotions and their verbal denotation make up the backbone of the social teaching of children to regulate and control emotions [1].

## Methods and Results

A complex study of senior preschool children with strabismus and amblyopia was held on the base of Ekaterinburg Specialized Kindergarten of a compensatory kind for children with visual impairments No 569. The traditional logopedic

diagnostics was used. The methods and techniques of investigation of the emotional sphere of preschoolers have been worked out on the basis of recommendations of S. D. Zabramnaya, V. M. Minaeva, R. S. Nemov, G. A. Uruntaeva, L. S. Tsvetkova and have been described in detail in our previous publications [7; 8].

46 preschool children with strabismus and amblyopia, systemic speech underdevelopment (SSU) and pseudobulbar dysarthria were selected from among the pupils of the education institution. Let us dwell in more detail on the results of the study of the vocabulary, grammatical aspect, coherent speech and emotional sphere of the children of the group under observation.

The preschool children of the given category had difficulties with understanding adjectives denoting color, form, height, length, width, prefixal verbs, spatial adverbs and some nouns. Problems in understanding nominative vocabulary were connected with underdevelopment of object gnosis and, as a consequence, with poor and underdifferentiated ideas-images about objects. Underdevelopment of spatial perception led to the fact that the tasks on understanding complex logico-grammatical constructions – comparative and inverted ones – were beyond comprehension for the children of this group.

Marked immaturity of active vocabulary revealed itself in problems with actualization of the nominative and predicative lexicon and adverbs, in poor ability or absolute inability to choose synonyms or antonyms, and in word building mistakes. Underdevelopment of the grammatical aspect of speech showed itself in violations of word form derivation of both non-productive and productive grammatical categories; there emerged difficulties constructing sentences: dropping prepositions and incorrect word order in the sentence.

The limited number of verbs and adjectives in the vocabulary brings about problems with programming coherent utterances and structural agrammatism. While making up sentences on a picture, 87.0% of those tested had difficulties; for example, they made up such sentences as “*U nego slon*”, “*Tut mashina*”. 13% of the children of the experimental group could not make up a sentence by themselves.

While retelling a familiar fairy tale, the children forgot the plot, showed lack of logic, mixed up main events or dropped them (50.0% of children). All children had difficulties with the lexico-grammatical aspect of retelling. Here is an example of retelling of the fairy tale “The Turnip”: “*Potom baba shla, za baboy — devochka shla, potom sobaka uvidela, chto devochka prishla. Za sobakoy kiska bezhit, za kiskoy — myshka*”.

Composition of a story based on a series of pictures caused difficulties in all children under experiment: there were mistakes in placing pictures in the right order, vague understanding of the meaning and fragmental retelling of the plot, as well

as agreement and government mistakes.

The stories made up by the children on one plot-driven picture consisted of 1-2 sentences and were underinformative.

**Table 1.** Subdivision of children according to the level of formation of coherent speech, %.

Levels of formation	Kinds of activity						Final level
	making up sentences	text retelling	making up a story on a series of pictures	making up a story on a plot-driven picture	making up a story about an object	making up a story from one's experience	
high	0.0	0.0	0.0	0.0	0.0	4.3	0.0
medium	87.0	50.0	28.3	26.1	30.4	13.0	26.1
low	13.0	50.0	71.7	73.9	69.6	82.6	73.9

Problems with making up a story on the basis of personal experience have been revealed in 95.7% of preschoolers of this group. It was typical of them simply to enumerate actions, for example: “*Ya spal, kushal, gulyal*”. There were no such structural elements in the story as beginning and end.

Description of an object caused difficulties in 100% of the children of the category under study. It was short, and consisted of 1-2 sentences, for example: “*Kukla krasivaya, sidit na stole*”; “*Eto krasnaya mashina*”.

The absence of semantic unity and utterance coherence was combined with instances of morphological agrammatism.

Our study of the emotional sphere of preschoolers with SSU revealed underdevelopment of the motor, vocal and intonational basis necessary for the development of facial expressions and pantomimic positions. The children demonstrated a significant reduction of the skills of arbitrary formation of facial expressions for the basic emotions (surprise, fear, sadness and anger); we often observed a mixture of emotions. A part of those tested (52.2 %) reproduced these emotions with little expression and in an undifferentiated manner. Incapability of pantomimic expression of the basic emotions was observed in 48% of the preschoolers. 52% of the children had static, monotonous, tense and inadequate pantomimic positions that did

not match facial expressions. Vocal expressiveness was impaired in all children under experiment, which is connected with the low potential of voice intensity, pitch and timbre.

In the course of the study of perception and comprehension of emotions shown in graphical images, a low level of formation of the given skill was demonstrated by 69.6 % of the children. They did not recognize the emotion of anger, or mixed it up with fear. 60.9 % of the preschoolers managed to interpret the facial expression of sadness only with the help of the experimenter. 56.5 % of the children found it difficult to recognize the emotion of surprise; quite often, a surprised face was taken as bad, cheerful or crying. The expression of calmness was not recognized by 82.6 % of those tested: they said it was joy or surprise, that the face was “gloomy” or “bad”.

The emotional state of the characters in plot-driven pictures was hard to define by 47.8% of the children. They did not recognize surprise and fear, and mixed up the feelings of sadness, surprise and fear. 65.2% of the children found it

difficult to say whether the characters in the pictures performed good or bad actions.

Understanding of emotional content of the pictures included in the presentation materials [15] caused difficulty in 47.8% of those tested, especially in the pictures where the characters were depicted in a calm emotional state (91.3 % of preschoolers). The emotion of interest was mistaken for sadness, or was not recognized at all by 73.9% of the children.

The emotional content of works of literature was comprehended with mistakes by the majority of the children under experiment. The works depicting sorrow and fear caused most difficulties in 87.0% of preschoolers.

### Rehabilitation Work

Taking into account our research results, we have defined the purpose of rehabilitation work: formation of coherent speech in senior preschool children with strabismus and amblyopia, SSU and pseudobulbar dysarthria with simultaneous application of the methods and techniques of development of perception, understanding and reproduction of emotions.

**Table 2.** Subdivision of children according to the level of formation of emotional sphere, %.

Levels of formation	Kinds of activity			Final level
	motor, vocal and intonational basis	arbitrary formation of facial expressions and pantomimic positions	perception and understanding of emotions	
high	0.0	4.3	0.0	0.0
medium	65.2	43.5	23.9	26.1
low	34.8	52.2	76.1	73.9

Rehabilitation intervention drew on the traditionally used logopedic stages and areas of work with preschool children with general and systemic speech underdevelopment (V. K. Vorob'eva, V. P. Glukhov, N. S. Zhukova, R. I. Lalaeva, L. N. Likhodedova, E. M. Mastyukova, S. A. Pokutneva, N. V. Serebryakova, G. V. Chirkina, T. B. Filicheva, etc.).

From among the scope of the methods of stimulating and development of emotional processes in preschoolers, we have used the ones worked out by V. Z. Denisina, E. I. Izotova, I. Yu. Kondratenko, S. V. Kryukova, N. L. Kryazheva, V. M. Minaeva, E. V. Nikiforova, E. V. Ryleeva, M. I. Chistyakova, N. A. Yakovleva.

All rehabilitation work has been subdivided into three successive stages (initial stage, basic stage, and reinforcement), each of which included 10 subgroup lessons on development of lexico-grammatical means of the language and 10 subgroup lessons on development of coherent speech. Individual logopedic sessions were carried out daily. It is more convenient to use lessons on development of coherent speech for the formation of emotional processes.

Logopedic work was carried out in three main blocks.

**Block 1** included formation of the motor sphere (gross and fine motor skills, facial expressions, and

articulation motor skills); the sensory sphere (special concepts, visual and auditory gnosis, and visual, auditory-speech and motor memory).

**Block 2** was targeted at formation of the lexico-grammatical and phonetical-phonemic aspect of speech and coherent speech.

**Block 3** presupposed work on formation of the emotional sphere:

– motor, vocal and intonational basis for reproduction of emotions and emotional memory; understanding, recognition and reproduction of the basic emotions (joy, calmness, surprise, anger, sadness and fear) *at the initial stage of work*;

– skills of perception, understanding and reproduction of more sophisticated emotions and feelings (sorrow, shame and guilt, offence, happiness, complacency and boasting, envy, suffering, satisfaction, interest, and pride) *at the basic stage of work*;

– differentiation of similar emotions and feelings (sadness – sorrow, displeasure – anger, surprise – interest, satisfaction – complacency, fright – fear, sadness – displeasure, joy – delight); reinforcement of the concepts of feelings (love, hope, belief) *at the reinforcement stage of work*.

We have made changes and amendments in the structure and content of frontal lessons on development of coherent speech in children.

1. *The preliminaries of the lesson* were held using psycho-gymnastic exercises aimed at proper development of the posture, walk, and gesticulation; they facilitated strengthening and stimulation of the muscular apparatus taking part in pantomimic and facial muscle movements and helped to create a positive emotional background at the lessons.

2. *Facial muscle, articulatory and respiratory gymnastics* were aimed at formation of arbitrary movements of the muscles of the forehead, eyes, lips and cheeks, which later helped the children to reproduce facial expressions and pantomimic movements of the emotions practiced more expressively.

3. *Presentation of the topic of the lesson* was accompanied by announcing the lexical topic and “current” emotion.

4. *Acquaintance with the graphical image of the “current” emotion and its facial expression.* Pictograms of the basic human emotions were printed on a special color background, for example: calmness – on the green one, anger – on the violet one, joy – on the pink one, etc. It was discussed at this stage what movements of facial muscles were needed to express a certain emotion. The formation of facial expression of an emotion was held using a mirror due to which the children could control the work of facial muscles.

5. *Looking at the picture or first reading of a story.* The skills of perception and understanding of the emotional content of pictures or literary works (depending on the main aim of the lesson) expressing the “current” emotion. All visual and verbal material corresponded to the topic of the lesson and helped the pupils master the knowledge about the skill practiced at the lesson.

6. *Talk about what has been seen or read.* Talks were held after looking at the picture for some time, or reading a text. It facilitated development of dialogic speech and reinforcement of non-verbal means of communication.

7. *Formation of facial or pantomimic expression of a “current” emotion.* At the given stage, we practiced the skills of facial or pantomimic expression of emotions in the form of a dynamic pause.

8. *Lexico-grammatical exercises training children to make up a coherent utterance or retelling* were held with the aim to expand and activate the children’s vocabulary, and to reinforce emotive lexicon (joy, merrymaking, delight; surprise, marvel, miracle; anger, rage, displeasure; sadness, sorrow, anguish; fear, fright). We tried to develop the use of semi-productive or non-productive word form derivation types learnt at the lessons on lexico-grammatical means.

9. *Making up a story based on a picture (a series of pictures) or retelling of a text.* While forming coherent speech at the initial stage of work, accent was laid on perfection of the skill of constructing and extending sentences. Then the children were taught to retell short texts of 3-4 sentences using visual support and utterance plan in the form of pictograms. Work on formation of coherent speech and skills of perception and understanding emotions conveyed by thematically selected literary texts or pictures was organized on one and the same linguistic material. For example, at the lesson on retelling within the framework of the lexical topic "Wild Animals and Birds Living in the Forest. Fear.", we worked with the story by L.N. Tolstoy "Two Friends". This work did not only form the skills of text retelling but also reinforced the concept of fear and its pantomimic expression. At the lesson, at which it was necessary to make up a story on a series of plot-driven pictures on the topic "Domestic Animals and Birds", the children worked with the story "The Living Hat" by N. Nosov and a series of illustrations to it. Apart from development of coherent speech, the given text was used to reinforce the children's knowledge and concepts about the emotions of joy, fear and surprise.

*At the basic stage of work, the children were taught to make up*

narrative descriptions. We used the technique of telling a story on the part of another character, for example, a sofa or kitchen table. One pupil made a retelling, and the other children did not know what character was being spoken about. They made their guesses after they had listened to the narrative description the plan of which had been thought out and drawn before. While making up a story on a series of pictures, the children were asked to think of its continuation.

*At the reinforcement stage, more attention was devoted to making up stories with creative elements: stories on a given topic, stories after an excursion, etc. The children made up stories from their own experience in which they expressed their emotions and feelings. We tried to reinforce the skills of making up comparative narrations-descriptions of objects and landscapes and retelling on the part of other characters. While making up a coherent utterance at this stage of work, the children built up the plan of the story themselves and drew it with the help of pictograms.*

*10. Assessment of the children's achievements* included analysis of the stories; the children evaluated their own work and that of their peers.

*11. The final stage of the lesson presupposed* a brief summary and identification of the most significant material.



### Conclusion

The results of our research demonstrated significant improvements in the development of coherent speech and emotional sphere in the experimental group, which is reflected in table 3.

The preschoolers of the experimental group planned their utter-

ances independently, used varied vocabulary, including the emotive one, in their stories adequately, and actively employed paralinguistic means of communication: gestures, facial expressions and pantomimic movements, and expressed their mood with proper intonation.

**Table 3.** Subdivision of children according to the level of formation of coherent speech and emotional sphere in the experimental and control groups at the summative and control stages of the experiment, %

Observation blocks	Levels of formation	Groups of preschoolers			
		Experimental group		Control group	
		summative stage	control stage	summative stage	control stage
coherent speech	high	0.0	4.3	0.0	0.0
	medium	34.8	91.3	21.7	69.6
	low	65.2	0.0	78.3	30.4
motor, vocal and intonational basis	high	0.0	17.4	0.0	17.4
	medium	60.9	82.6	69.6	73.9
	low	39.1	0.0	30.4	8.7
arbitrary formation of facial expressions and pantomimic positions	high	4.3	30.4	4.3	13.0
	medium	39.1	60.9	47.8	60.9
	low	56.5	8.7	47.8	26.1
perception and understanding of emotions	high	0.0	39.1	0.0	13.0
	medium	30.4	52.2	17.4	39.1
	low	69.6	8.7	82.6	47.8

The statistic analysis results using Pearson's chi-squared test corroborated the significance of the data of the control stage of our experiment. The indicator value obtained according to the results of the study of oral speech formation ( $\chi^2_{\text{exp}} = 6.55$ ) is greater than the corresponding tabulated value equal to 5.99. The indicator value obtained according to the results of the emotional sphere formation ( $\chi^2_{\text{exp}} = 8.63$ ) is greater than the correspond-

ing tabulated value equal to 5.99. It means that the changes in the level of formation of coherent speech and emotional sphere of the experimental group children that have emerged in the course of training are statistically significant.

The analysis of the experimental data obtained in the course of the study, as well as the calculations using the mathematical statistics methods testify to the efficiency of the suggested work on development

of coherent speech on the basis of the methods and techniques of formation of perception, understanding and reproduction of emotions, which means that the suggested approach allows caregivers to improve the quality of preparation of preschoolers for schooling.

#### References

1. Artem'eva, T. P. Izuchenie i razvitie emotsional'noy sfery mladshikh shkol'nikov s umstvennoy otstalost'yu i zaderzhkoy psikhicheskogo razvitiya / T. P. Artem'eva // Spetsial'noe obrazovanie : nauch.-metod. zhurn. — 2016. — № 1. — S. 5—15.
2. Babina, E. S. Kharakteristika osobennostey glagol'noy leksiki u doshkol'nikov s ambliopiyey i kosoglaziem po dannym konstatiruyushchego eksperimenta / E. S. Babina, N. M. Trubnikova // Sb. nauch. st. i materialov Vseros. nauch.-prakt. konf., posvyashch. 50-letiyu fakul'teta pedagogiki i metodiki nachal'nogo obrazovaniya Magnitogor. gos. un-ta / pod red. I. A. Kuvshinovoy, E. V. Isaevoy. — Magnitogorsk : MaGU, 2009. — S. 28—34.
3. Vorob'eva, V. K. Metodika razvitiya svyaznoy rechi u detey s sistemnym nedorazvitiem rechi : ucheb. posobie / V. K. Vorob'eva. — M. : ACT : Astrel' : Tranzitkniga, 2006. — 158 s.
4. Glukhov, V. P. Formirovanie svyaznoy rechi detey doshkol'nogo vozrasta s obshchim rechevym nedorazvitiem / V. P. Glukhov. — M. : ArkTI, 2002. — 144 s.
5. Deniskina, V. Z. Formirovanie nerechevykh sredstv obshcheniya u detey s narusheniem zreniya : metod. rekomendatsii / V. Z. Deniskina. — Verkhnyaya Pyshma : Verkhnepyshmin. tip., 1997. — 22 s.
6. Doroshenko, O. V. Korrektsionno-pedagogicheskaya rabota po razvitiyu svyaznoy rechi starshikh doshkol'nikov s narusheniyami zreniya : avtoref. dis. ... kand. ped. nauk : 13.00.03 / Doroshenko Oksana Viktorovna. — M., 2009.
7. Karakulova, E. V. Korrektsiya sistemnogo nedorazvitiya rechi s uchedom formirovaniya emotsional'noy sfery u doshkol'nikov : ucheb.-metod. posobie / E. V. Karakulova ; Ural. gos. ped. un-t. In-t spetsial'nogo obrazovaniya. — Ekaterinburg, 2012. — 130 s.
8. Karakulova, E. V. Pedagogicheskaya tekhnologiya preodoleniya sistemnogo nedorazvitiya rechi s uchedom formirovaniya emotsional'noy sfery u doshkol'nikov s funktsional'nymi narusheniyami zreniya : dis. ... kand. ped. nauk : 13.00.03 / Karakulova Elena Viktorovna ; Ural. gos. ped. un-t. — Ekaterinburg, 2011. — 279 s.
9. Kryukova, S. V. Udivlyayus', zlyus', boyus', khvastayus' i raduyus'. Programma emotsional'nogo razvitiya detey doshkol'nogo i mladshego shkol'nogo vozrasta : prakt. posobie / S. V. Kryukova, N. P. Slobodnyak. — M. : Genesis, 2002. — 208 s. : il.
10. Lapp, E. A. Razvitie svyaznoy rechi u detey 5—7 let s narusheniyami zreniya: planirovanie i konspekty / E. A. Lapp. — M. : TT's «Sfera», 2006. — 256 s.
11. Likhodedova, L. N. Formirovanie leksiko-grammaticheskogo stroya rechi u detey s ambliopiyey i strabizmom v doshkol'nom vozraste : dis. ... kand. ped. nauk : 13.00.03 / Likhodedova Lyudmila Nikolaevna ; Ural. gos. ped. un-t. — Ekaterinburg, 1998. — 234 s.
12. Minaeva, V. M. Razvitie emotsiy doshkol'nikov. Zanyatiya. Iгры : posobie dlya prakticheskikh rabotnikov doshkol'nykh uchrezhdeniy / V. M. Minaeva. — M. : ARKTI, 2001. — 48 s.
13. Pokutneva, S. A. Razvitie svyaznoy rechi doshkol'nikov s narusheniem zreniya : dis. ... kand. ped. nauk : 13.00.03 / Pokutneva Svetlana Alekseevna. — Kiev, 1988. — 194 s.
14. Repina, Z. A. Neyropsikhologicheskoe izuchenie detey s tyazhelymi defektami rechi : ucheb. posobie / Z. A. Repina ; Ural. gos. ped. un-t. — Ekaterinburg, 1995. — 121 s.
15. Ryleeva, E. V. Puteshestvie v mir emotsiy : demonstratsionnye materialy dlya frontal'noy raboty. Razdatochnye materialy dlya individual'noy raboty. Pedagogicheskaya tekhnologiya «Otkroy sebya» / E. V. Ryleeva. — M. : Linka-Press, 2000. — 28 s.