

HPEPA 2019

Humanistic Practice in Education in a Postmodern Age 2019

COMMUNICATION ACTIVITY OF CHILDREN (WITH HEALTHY SPEECH DEVELOPMENT AND SPEECH IMPAIRMENT)

Regina Ziganurova (a)*, Albina Vafina (b), Tatyana Kapisheva (c), Guzel Kurbangaleeva (d)

*Corresponding author

(a) Bashkir State Pedagogical University n. a. M. Akmulla, ul. Oktyabrskoj revoljucii, 3-a, Ufa, RB, the Russian Federation, kirillova.regina@yandex.ru

(b) Bashkir State Pedagogical University n. a. M. Akmulla, ul. Oktyabrskoj revoljucii, 3-a, Ufa, RB, the Russian Federation, albinaabakacheva@mail.ru

(c) Bashkir State Pedagogical University n. a. M. Akmulla, ul. Oktyabrskoj revoljucii, 3-a, Ufa, RB, the Russian Federation, tanja415@yandex.ru

(d) Bashkir State Pedagogical University n. a. M. Akmulla, ul. Oktyabrskoj revoljucii, 3-a, Ufa, RB, the Russian Federation, dialina2002@mail.ru

Abstract

The article proves the relevance of study of communication activity among children with different speech development levels; it presents the methods and techniques of comprehensive diagnostics that allow to characterise the verbal communication impairment; justifies the usage of psycholinguistic approach while studying communication, with help of which it is possible to get an idea of major impairments and the most preserved functions. The main methods of research are the following: the analysis of scientific literature devoted to the issue of communication activity among pre-school children; as well as the diagnostic techniques, including observation, conversation, analysis of psychological, medical and educational documentation, methods of statistical data processing. The article presents the set of diagnostic materials and assessment criteria of communication activity among pre-school children, taking into account a psycholinguistic approach and main theoretical aspects of speech act occurring. During the research process, the identified difficulties of communication activity among children, which are expressed in undeveloped inner speech act programming, impairment of language (lexical and grammatical) design of inner program, insufficient expansion of semantic parts, underline the necessity to develop a system of correction pedagogic work, focused on the formation of communication activity in children with speech underdevelopment.

2357-1330 © 2020 Published by European Publisher.

Keywords: Communication activity, general speech underdevelopment, psycholinguistic analysis, pre-school children.



This is an Open Access article distributed under the terms of the Creative Commons Attribution-NonCommercial 4.0 Unported License, permitting all non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

1. Introduction

Communication activity is the object of the research for linguists (Bakhtin, 1979; Karaulov, 1987; Kudinova et al., 2018; Sternin, 2004; Zeitlin, 2000), teachers (Lisina, 1986; Ushakova, 2008) and psychologists (Leontiev, 1969; Lurii, 1975). Having analysed the approaches for understanding essence of the “communication activity” concept represented by the authors, we have determined that the communication activity is considered to be an activity on transfer of information through the linguistic or nonlinguistic signs.

Describing communication, the researches distinguish the following structural components: system-linguistic (phonetic, lexical, morphological, syntactic) and communicative: the ability to use language means according to the certain speech situation. These skills (linguistic and communicative) are interrelated and mutually conditioned, they usually develop simultaneously.

According to G. Weinrich, “we usually speak not in isolated words, but in sentences and texts, and our speech depends on the situation” (as cited in Denisenko & Chebotareva, 2008, p. 10). The text as a complete logical and semantic organization, represented by deep semantic and operational-technical levels, is the main unit of communication. The psycholinguistic approach has the highest priority in considering the communication activity. It allows to fully analyse the mechanism of speech production in cases of different speech impairments (Leontiev, 1969; Lurii, 1975).

The studies of N.S. Zhukova, Levina, Mastuykova, T.B. Philicheva, S.N. Shakhovskaya, L.B. Khalilova, G.V. Chirkina and others describe the qualitative diversity of impairments in thematic selection and semantic choice of words during the process of speech act programming in children with different speech development levels (Khalilova, 1997; Levina, 1968; Philicheva, Cheveleva, & Chirkina, 1989; Shakhovskaya, 1997; Zhukova, Mastuykova, & Philicheva, 2000). These impairments in speech development distort the communicative-speech development, cause the specific communication difficulties, which are expressed by lack of interest in contacts with adults and peers, inability to behave in a communicative situation, negative attitude to speech (Nathan, 2002; Rice, Sell, & Hadley, 1991). Khalilova (1997) emphasizes that this category of children has impairments in speech act programming at all stages of its psycholinguistic occurring.

2. Problem Statement

Despite the considerable interest of researches in the problem of studying the communication activity among children with different speech development levels, the professional literature does not provide enough methods and techniques of comprehensive diagnostics, allowing to characterise the verbal communication impairments, taking into account a psycholinguistic analysis of defect structure.

3. Research Questions

Question of the research: psycholinguistic analysis of acquisition of communication activity by pre-school children.

4. Purpose of the Study

Purpose of the study: analysis and studying of acquisition of communication activity by pre-school children with different speech development levels, taking into account the psycholinguistic approach.

5. Research Methods

When researching the communication activity of pre-school children, we have been using the following methods: analysis of psychological, medical and educational documentation, individual interviews with parents and educators, monitoring of children during the play and education activities; ascertaining experiment with use of psychological and educational, psycholinguistic approaches to the communication activity of pre-school children; qualitative, quantitative and statistical method of processing and consolidation of the results obtained: Mann–Whitney nonparametric U test, correlation analysis (according to K. Spearman), factorial analysis.

6. Findings

The research was carried out in 3 stages: 1) examination of psychological, medical and educational documentation; interviews with parents and educators, monitoring of children during the play and education activities; 2) studying of dialogic speech on the adapted technique of Lalaeva (2004); studying of the monologic speech on the adapted technique of Glukhov (2000); exploring the possibilities of verbal communication of children with their peers, family (technique of R. Gille, “My family” painting technique) (Klyueva & Philippova, 2006).

The following pre-school group of children took part in the ascertaining experiment: 23 children with general speech underdevelopment (GSU) as the first experimental group (EG-1) and 31 preschool child without any identified deviations in speech development as the second experimental group (EG-2).

The analysis of medical and educational documentation at the first stage of the ascertaining experiment has determined that the majority of pre-school children with speech underdevelopment (EG-1) have a compromised medical history, which may have influenced further speech development. The analysis of medical history records of the second experimental group has shown that children with healthy speech development are mostly born from the first or second pregnancy, which has no problems in most cases. Early speech development of healthy children (EG-2) has been held according to the age and has not been interrupted.

At the second stage, the technique of ascertaining experiment, focused on study of dialogic speech of pre-school children, has been based on using of set of tasks, where a question-answering conversation with visual aid of pictures has been the content of it. According to the data compiled, the condition of dialogic speech of two experimental groups has been characterised by the following levels:

1. 6,5% of children with GSU (EG-1) and 74% of pre-school children with healthy speech development (EG-2) have shown a “High” level of this task execution. During the question-answering conversation with visual aid, these children were very concentrated, they had a positive emotional state, confidence while answering, they were looking at the pictures with great interest. Extended sentences,

compiled by them, were characterised by semantic completeness of main components of the picture content, correctness of lexical and grammatical design of sentences.

2. 41,5% of children with speech underdevelopment (EG-1) and 26% of their peers with healthy speech development (EG-2) have shown a “Necessary” level. These children had some difficulties in forming the sentences, which were expressed in easy misrepresentation of the semantic line of presented plot and insufficiently expanded sentences, resulting in semantic incompleteness of picture content.

3. 52% of children with GSU (EG-1), which were supported by the experimenter, had an “Unsatisfactory” level of dialogue forming with visual aid of pictures. They had difficulties expressed in semantic incorrectness, insufficiently extended sentences.

4. 2% of children with speech impairment (EG-1) have had a “Critical” level of dialogic speech condition. These pre-school children had undeveloped operations of awareness and segmentation of a problem situation on the picture, impairment in forming the semantic sentence line, where there was a lack of grammar structuring required for children of their age. Moreover, these children used short and grammatically incorrect sentences or one-word answers.

For presentation purposes, we have summarized the research results of dialogic speech of pre-school children (EG-1) with GSU (III level) and pre-school children with healthy speech development (EG-2) in the following summary diagram (Figure 01).

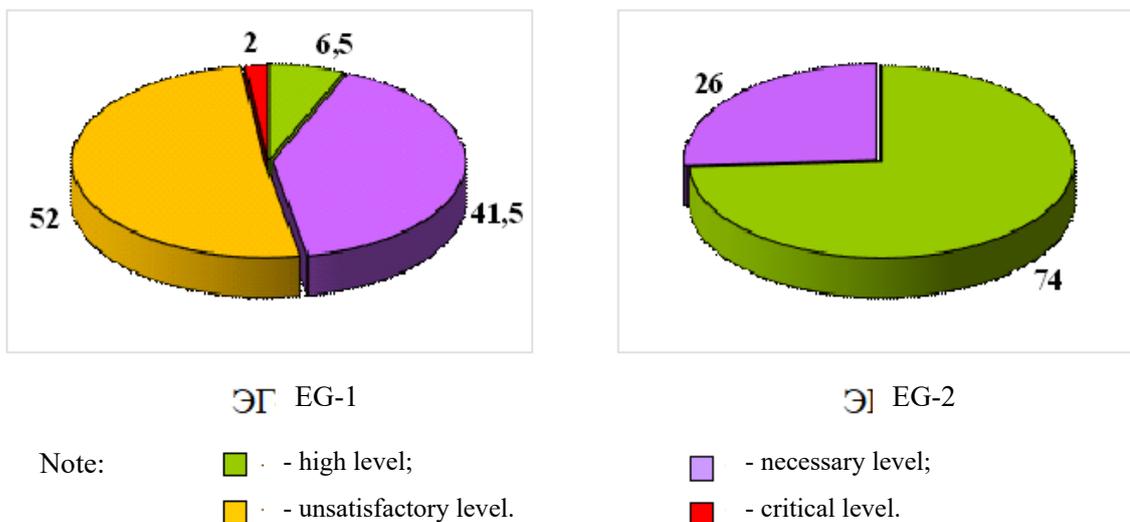


Figure 01. The condition of dialogic speech of pre-school children

In analysing the obtained data while studying of monologic speech of children in the experimental groups, there were revealed the following features:

1. 69% of children with healthy speech development (EG-2) have shown a “High” level of monologic speech skills. The sentences, compiled by their own, had the sequence in transfer of events, semantic connection between fragments-episodes, informativity and comprehensiveness of the plot, correctness of lexical and grammatical design of the sentence.

2. 22% of children with speech underdevelopment (EG-1) and 31% of children with healthy speech development (EG-2) have had a “Necessary” level. They made up stories with a little help from an adult and their verbal messages contained all main semantic parts of text. However, there were some problems with the coherence of speech and one-time mistakes in phrase construction.

3. 64% of children with GSU (EG-1) have had an “Unsatisfactory” level of this task execution. They had problems with the coherence of speech in monologic phrases, missed some semantic elements, misrepresented the meaning of content, impaired the lexical and grammatical design of sentences.

4. 14% of children with GSU (EG-1) have shown a “Critical” level. They showed a lack of confidence while making up a story and were unable to use the help of an adult, they frequently got distracted during the monologue. There were serious semantic mistakes, incorrect coherence, and also flaws in grammatical design of sentences.

For presentation purposes, we have summarized the research results of monologic speech of children with general speech underdevelopment (III level) and with healthy speech development in the following summary diagram (Figure 02).

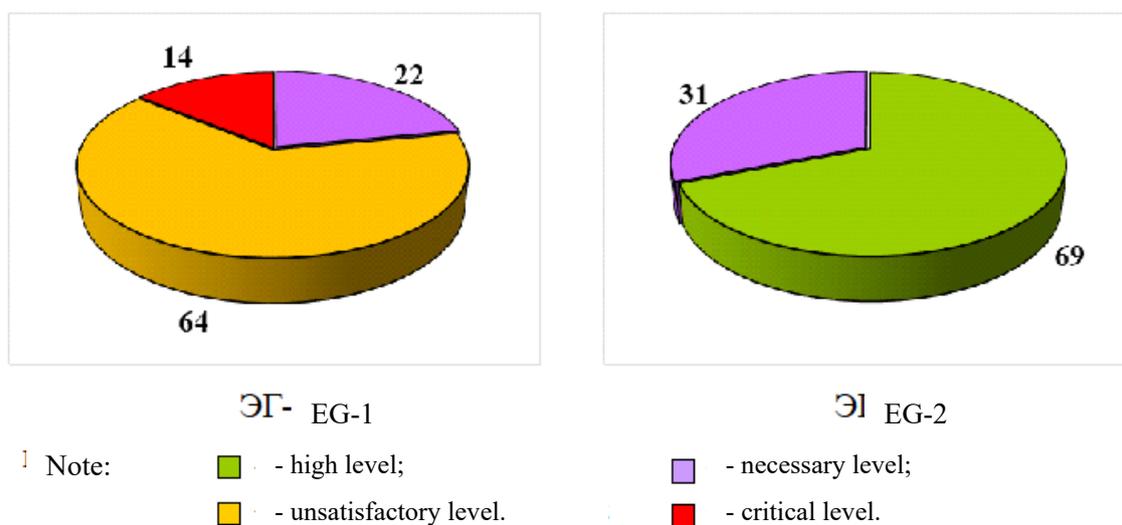


Figure 02. The condition of monologic speech of pre-school children

At the third stage, the diagnostic study of children with GSU (EG-1) and children with healthy speech development (EG-2) on R. Gille projective technique enabled us not only to assess the system of relationship of child with close adults, peers, but also to show a social adequacy degree of his/her behaviour.

Analysing the results, we have found that children from experimental groups have close and strong relationship with their parents (this is shown by the following figures: relationship with mother – 87% (EG-1) and 94% (EG-2), relationship with father – 43% (EG-1) and 45% (EG-2), relationship with mother and father, considering them as a family couple – 52% (EG-1) and 61% (EG-2). Children expressed a preference for family members, drawn themselves near their mother or father or with the whole family, called for mother or father while being joyful or upset.

According to the data compiled, it may be concluded that a communication with mother is especially important for pre-school children over five. Children expressed their emotional attitude to mother by the

following phrases: “I love my Mummy”, “Mummy is the best”, they consider mother to be a person, who is sensitive to their successes, who always helps: “Mummy will praise”, “Mummy will help”, etc. However, other 13% (EG-1) and 6% (EG-2) of children have shown a weak affection, they tend to avoid communication with mother. When children were upset or they experienced difficulties, they said that they would handle it by themselves not to disappoint Mum. We consider such behaviour of children as an evidence of alienation and avoiding mother, and also as child’s lack of security sense. Communication with father is less important for pre-school children over five (43% of children with GSU (EG-1) and 45% of children with healthy speech development (EG-2)) than a communication with mother.

According to the experimental findings below, the communication with peers is not significant for most of pre-school children with general speech underdevelopment. Monitoring of children, examination of their social circle with use of Rene Gille projective technique have shown that only 43% of children with GSU have mentioned the peer as someone with whom they want to communicate, while 74% of children with healthy speech development have shown a desire to communicate with their peers.

74 % of children with general speech underdevelopment and 81 % of children with healthy speech development have had a positive social adequacy of behaviour. Children demonstrated knowledge of behaviour rules and social standards in their replies, could explain their replies and expressed their emotional attitude to these standards.

The analysis of paintings of children from experimental groups on “My family” topic resulted in the following conclusions: Assessing the paintings on the parameter of location and distance between family members, 78% of children with GSU (EG-1) and 87% of children with healthy speech development (EG-2) have shown a positive relationship. The distance between family members was very small or they were holding hands in paintings of children, which indicated cohesion and positive psychological environment in family. At the same time, the distance between family members was long in paintings of 22% of children with speech impairment (EG-1) and 13% of children with healthy speech development (EG-2), which indicated a low level of emotional ties and family relationship.

Assessing the paintings on the parameter of emotional state feature, we have found positive emotions (everyone in the paintings has been smiling) in family paintings of 61% of children with speech underdevelopment (EG-1) and 84% of their peers with healthy speech development (EG-2). In turn, it has been impossible to identify the emotional state of family members on paintings of 17% of pre-school children over five with speech underdevelopment and 6% of children with healthy speech development due to the absence of details in faces of people. Negative feelings have not been expressed in family paintings of experimental groups.

It has been noted that the depicted family members have shown care and support in paintings of 17% of children with GSU (EG-1) and 45% of pre-school children with healthy speech development (EG-2), which indicates a positive nature of the relationship in the family. Family paintings of other experimental groups have not contained visible features, which could allow to determine the nature of the relationship. However, it should be noted that none of the paintings contained negative (aggressive) nature of the relationship.

Both experimental groups used warm and cold colours in their paintings, there were no paintings in black and white.

30% of children with GSU (EG-1) and 81% of pre-school children with healthy speech development (EG-2) painted themselves in the centre of the sheet, indicating that children felt comfortable in his/her family. 19% of children with healthy speech development (EG-2) and 53% of children with GSU (EG-1) painted themselves in peripheral part of the sheet, and 17% of children with GSU (EG-1) did not paint themselves, and that shows the absence of community sense in the family.

Assessing the image of the child himself/herself, we have noted that 30 % of children with GSU (EG-1) and 81% of children with healthy speech development (EG-2) have had almost the same sizes as the sizes of other family members in their paintings. This fact also indicates the psychological comfort in the family. 19% of pre-school children over five with healthy speech development and 53% of children with speech impairment have painted themselves smaller than other family members.

65% of children with speech underdevelopment (EG-1) and 68% of their peers with healthy speech development (EG-2) have painted their parents of approximately one size, other 35% of children with GSU (EG-1) and 32% of children with healthy speech development (EG-2) have painted one of their parents smaller or bigger compared to the other, which indicates the degree of dominance (submission).

In general, studying of paintings of children with GSU on “My family” topic showed that the topic was not very interesting for them, they felt no excitement over the painting process. Children with healthy speech development usually commented on their paintings, while children with GSU did not. Most of the paintings of children with healthy speech development had the plot, the family members interacted with each other. At the same time, none of the paintings of children with speech underdevelopment had the plot. Almost all paintings of children with speech impairment were characterised by lack of skill in painting, which could influence the painting process and did not allow them to show their emotional attitude to the family image.

Therefore, during the analysis of verbal communication possibilities, we have found that it is common for children with GSU to have poor communication skills due to their certain impairments in personal development (insularity, negative attitude to speech, etc.), a low self-esteem, and also a negative nature of the relationship between child and parents.

To ensure the credibility of the study of verbal means of communication activity, the experimental findings have been analysed statistically with Mann–Whitney nonparametric U test. The results of processing of statistical data which have been obtained in the dialogic and monologic speech study have confirmed that there are significant differences between children with GSU (EG-1) and with healthy speech development (EG-2). Having compared the indicators of dialogue and monologue formation, it has been revealed that the assessed criteria ($P=0.001$) have the most significant differences.

Taking into account the revealed speech flaws of experimental group with GSU, we have conducted a more detailed analysis of the features of dialogic and monologic speech condition with correlation and factor analysis, which allow to determine the latent structure of defect, to identify the leading impairments and more preserved functions.

Through the correlation analysis of dialogic speech results, we have found that the criteria of semantic adequacy are the most closely interrelated while answering the questions on illustration with the plot and series of pictures ($r_s=0.845$ when $P\geq 0,01$), i.e. the semantic adequacy of perception of presented pictures is the most significant, interfering the perception of dialogic speech skills in the structure of defect

of children with GSU. This, in turn, can be explained by the insufficient eye-mindedness of this category of pre-school children: difficulties in finding of a causal association of the phenomena, actualisation of memory representations on the real world and verbal generalization of the phenomena, etc. Correlations between independence criteria while executing tasks on series of pictures and illustration with the plot ($r_s=0.710$ when $P \geq 0,01$) are also significant. This fact may indicate that children with speech underdevelopment have a decreasing level of leadership and activity in conversation. Due to this, they have needed the assistance of the experimenter. Correlations between criteria of phrase expansion while answering the questions on illustration with the plot and series of pictures ($r_s=0.686$ when $P \geq 0,01$) are moderately significant.

Factorial analysis of the results of coherent monologic speech of pre-school children with general speech underdevelopment allowed to identify the following factor loadings for indicators and make the following conclusions:

1. criterion of possibility to program the text has the greatest factor loading, which amounts to 5.251 (18.8 % of explainable dispersion). This may be due to the fact that undeveloped operations of monologue programming as a complete speech act and difficulties of content modelling are common for children of this category.

2. the average factor loading which amounts to 4.783 (17.1 % of explainable dispersion) has been identified for the criterion of lexical and grammatical design of sentence. This makes it possible to assert that it is difficult for children with speech underdevelopment to expand a semantic program of the sentence.

3. criterion of semantic adequacy has the moderate factor loading, which amounts to 4.732 (16.9% of explainable dispersion). This shows that it is common for children with speech impairment to have an insufficient expansion of phrase semantic parts, to miss the elements of sentence program, which indicates an insufficient understanding and awareness of text cause-effect relationship.

4. the independence criterion is less important, but also the significant indicator of factor loading – 3.256 (11.6% of explainable dispersion). Little speech activity, fear of verbal contact with peers and adults are common for children with GSU. All this leads to reduction of independence while execution of tasks, related to speech communication.

To sum up, the experimental study of verbal communication activity of pre-school children over five with general speech underdevelopment has shown that it differs significantly from the communication of their peers with healthy speech development both in terms of the level of development and main qualitative indicators.

7. Conclusion

The analysis of the experimental findings resulted in the following conclusions:

– most of children with healthy speech development have a “High” level of verbal language. The sentences, compiled by their own, had the semantic connection between fragments-episodes, comprehensiveness of the plot, correctness of language design of the sentence. Children with GSU mostly have an “Unsatisfactory” level that is characterised by problems with the speech coherence, missing of certain semantic elements, impairment of the lexical and grammatical design of sentences.

– it is common for children with GSU to have poor communication skills due to their certain impairments in personal development (insularity, negative attitude to speech, etc.), a low self-esteem, and also a negative nature of the relationship between child and parents.

– identified through the correlation analysis the impairment of verbal means of communication aim to the unevenness of relationship of different criteria for assessment of dialogic speech: Criteria of semantic adequacy while answering the questions on illustration with the plot and series of pictures ($r_s=0.845$ when $P \geq 0.01$) are closely interrelated when having the general speech underdevelopment, the correlations between independence criteria while executing tasks on series of pictures and illustration with the plot ($r_s=0.710$ when $P \geq 0,01$) are less strong, but also significant. The correlations between criteria of phrase expansion while answering the questions on illustration with the plot and series of pictures ($r_s=0.686$ when $P \geq 0.01$) are moderately significant.

– Factorial analysis of the results of coherent monologic speech of pre-school children with general speech underdevelopment allowed to conclude that it is common for children with GSU to have a low level of coherent monologic speech development, which is first expressed in undeveloped inner speech act programming (factor loading for this criterion amounts to 5.251), when children have difficulties in lexical and grammatical design (factor loading amounts to 4.783) of program, and their semantic parts are insufficiently expanded (factor loading amounts to 4.732). These flaws are identified in impossibility to form the sentences by themselves (factor loading of the independence criterion amounts to 3.256).

Having regard to the above, it may be concluded that it is common for children with GSU to have a low level of coherent monologic speech development, which is first expressed in undeveloped inner speech act programming, when children have difficulties in lexical and grammatical design of program, and their semantic parts are insufficiently expanded. These flaws are identified in impossibility to form the sentences by themselves. The experimental findings underline the importance to develop a system of correction pedagogic work, focused on the formation of communication activity in children with speech underdevelopment, taking into account the identified impairment in defect structure.

References

- Bakhtin, M. M. (1979). *Estetika slovesnogo tvorchestva* [Aesthetics of verbal creativity]. Moscow: Iskusstvo.
- Denisenko, V. N., & Chebotareva, E. Yu. (2008). *Sovremennye psikholingvisticheskie metody analiza rechevoy kommunikatsii* [Modern psycholinguistic methods of analysis of verbal communication]. Moscow: RUDN.
- Glukhov, V. P. (2000). *Metodika logopedicheskoy raboty po razvitiyu svyaznoy rechi doshkolnikov s obshim rechevym nedorazvitiem* [The methodology of speech therapy work on the development of coherent speech of preschoolers with general speech underdevelopment]. Yekaterinburg: Tsentr Problem Detstva.
- Karaulov, Yu. N. (1987). *Russkiy yazyk i yazykovaya lichnost* [The Russian language and a language personality]. Moscow: Nauka.
- Khalilova, L. B. (1997). *Psikholingvistichesky podkhod i ego ispolzovanie v izuchenii rechevykh rasstroystv* [Psycholinguistic approach and its use in the study of speech disorders]. *Psikholingvistika i sovremennaya logopediia*, 41-58.
- Klyueva, N. V., & Philippova, Yu. V. (2006). *Obsheniye. Deti 5-7 let* [Communication. Children of 5-7 years old]. Yaroslavl: Akademiia razvitiia.

- Kudinova, G. F., Kudinov, I. V., Aitova, V. M., Galimova, N. R., Evgrafova, O. G., & Zimovets, L. G. (2018). On Psychosemantics of Notions «Opinion», «Knowledge», «Belief» [On Psychosemantics of Notions "Opinion", "Knowledge", "Belief"]. *International Journal of Mechanical Engineering and Technology (IJMET)*, 9(10) 1010–1020.
- Lalaeva, R. I. (2004). Metodika psikholingvisticheskogo issledovaniya narusheniy ustnoy rechi u detei [Methodology for the psycholinguistic study of children speech disorders]. Moscow: Nauka. Retrieved from http://www.pedlib.ru/Books/5/0026/5_0026-1.shtml
- Leontiev, A. A. (1969). Psikholingvisticheskie edinitsy i porozhdenie rechevogo vyskazyvaniya [Psycholinguistic units and generation of speech utterance]. Moscow: Nauka.
- Levina, R. E. (1968). Osnovy teorii i praktiki logopedii [Fundamentals of the theory and practice of speech therapy]. Moscow: Prosvetsheniye.
- Lisina, M. I. (1986). Problemy ontogeneza obsheniia [Problems of communication ontogenesis]. Moscow: Prosvetsheniye.
- Lurii, A. R. (1975). Osnovnye problemy neirolingvistiki [The main problems of neurolinguistics]. Moscow: MSU.
- Nathan, L. (2002). Functional communication skills of children with speech difficulties: Performance on Bishop's Children's Communication Checklist. *Child Language Teaching and Therapy*, 18, 213-231.
- Philicheva, T. B., Cheveleva, N. A., & Chirkina, G. V. (1989). Osnovy logopedii [The basics of speech therapy]. Moscow: Prosvetsheniye.
- Rice, M. L., Sell, M. A., & Hadley, P. A. (1991). Social interactions of speech and language impaired children. *Journal of Speech and Hearing Research*, 34, 1299-1307.
- Shakhovskaya, S. N. (1997). Razvitie slovarya v sisteme raboty pri obshem nedorazvitiu rechi [The development of the word stock in the system of work with general underdevelopment of speech]. *Psikholingvistika i sovremennaya logopediia*, 240-250.
- Sternin, I. A. (2004). Kommunikativnoye povedenie doshkolnika [The communicative behavior of a preschooler]. Voronezh: Istoki.
- Ushakova, T. N. (2008). Rech rebenka. Problemy i resheniia [Speech of a child. Problems and solutions]. Moscow: IP.
- Zeitlin, S. N. (2000). Yazyk i rech: Lingvistika detskoy rechi [Language and Speech: Linguistics of children's speech]. Moscow: Vlados.
- Zhukova, N. S., Mastuykova, E. M., & Philicheva, T. B. (2000). Logopediia. Preodolenie obshego nedorazvitiia rechi u doshkolnikov [Speech Therapy. Overcoming the general underdevelopment of speech in preschool children]. Yekaterinburg: LITUR.