



## THEORETICAL BASSES OF SPEECH ACTIVITY OF MENTALLY RETARDED CHILDREN OF PRIMARY SCHOOL AGE

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### **Abstract:**

The article deals with the problem of forming and correction of speech activity of mentally retarded children of primary school age. The author is presented an integrated system of correction of speech development on the basis of the results of the study of speech development level of mentally retarded children of primary school within the modern educational space. The present system has a block structure with comprises: 1. Theoretical and methodological foundations of the technology of forming and correction of speech disorders and 2. A comprehensive program of differentiated correction of the speech development of this category of children.

To provide multidisciplinary care in the system of complex correction of the mentally retarded children has developed three main areas the middle of the program. The first is informative. It involves determination of the content of correctional technology to ensure the overcoming of language development problems in mentally retarded children. The second area covers the development of children with different types of dyzontogenesis of speech, caused mental retardation. Third direction – is development of individual algorithms taking into account specificity of each the mentally retarded child.

The operation of the proposed system involves four steps: conceptual and tentative; an obligatory; correction and development (basic); control and assessment (final).

**Keywords:** speech activity, dyzontogenesis of speech, mentally retarded children of primary school age

### **1. Introduction**

The problem of mental retardation is very topical at the present stage of development of society. Low socio-economic level of life, adverse environment, poor genetics, pathology

of pregnancy and childbirth it is not the whole list of reasons causing developmental disorder. Difficulty dysontogenesis development is also linked to the complexity of its manifestations. According to scientists, mental retardation is the persistent violation of all mental function, in most cases, caused by prenatal pathology. As a result of the violation, as a rule, it has irreversible consequences for normal life. Dysontogenesis development manifested: 1) in the lower level of intellectual development; 2) a specific behavioral disorders; 3) disorders of speech development. Speech development of mentally retarded children was and is the subject of special studies both domestic and foreign psychologists and special educators. It is known that the level of language development of these children differ greatly (Sin'ov, V., Matveeva, M., Hohlina, O., 2008).

Modern special educational establishments that work with this category of children, even today, have great difficulty in choosing the forms and methods of work. This is due to the lack of specific documentation, textbooks and special recommendations. Generally, in all specialized institutions of Ukraine while working with mentally retarded children, teachers–pathologist using methods and techniques aimed at children with normal intellect.

Analysis of the research indicates a unilateral study of speech in mentally retarded children. The above reasons explain the low level of effectiveness of remedial work. Analysis of speech development problems in mentally retarded children shows the necessity of studying, developing bases of formation of speech development of these children.

## **2. Formation of the objective and methodological of theoretical research**

The problem of language development of mentally retarded children first was mentioned at the beginning of XX century.

Domestic and foreign researchers have noted quite a number of mentally retarded children with speech disorders (M. Gnezdilov, E. Dmitrieva, G. Dulnev, N. Kravets, R. Lalaeva, V. Lubovsky, S. Liapidevskii, S. Mironov, V. Petrov, O. Pravdina, A. Savchenko, V. Sinev, E. Sobotovich, V. Tarasun, V. Tishchenko, M. Feofanov, Benda, Carell, Hartmann, Stanton, Wallin, etc.).

Speech disorder for mental disabilities children are very different and are persistent. These speech disturbances negatively affect the mental development of mentally retarded children, the effectiveness of their training. Generally accepted these children have underdevelopment of their cognitive activity (V. Bondar, L. Vygotsky, I. Eremenko, L. Zankov, H. Zamsky, A. Kornienko, A. Leontiev, A. Luria, M. Nudelman,

A. Obukhov, M. Pevzner, B. Pionsky, S. Rubinstein, V. Sinev, A. Solov'ev, N. Stadnenko, J. Schiff, M. Shtivelman and others). Speech Disorders aggravates this defect.

The study of literature and practical experience gives reason to believe that the nature and mechanisms of speech disorders in mental retardation are complex, multi-faceted, multi-factorial in nature. It requires an interdisciplinary approach to the taxonomy of these disorders.

Semiotics dysontogenesis disorders of speech activity with mental retardation provides for a two-tiered analysis: symptoms-logical (diagnostic and descriptive) and syndrome-logical (integrative and interpretive). Considering the nature of the logic of the diagnostic process, we were guided by the principle linguistic-pathological description of symptoms and syndromes speech in mental retardation. The study, description and qualification of clinical, psychological and pedagogical symptoms and syndromes corresponds ontogenetic aspect of this analysis. This became the basis for the tactics of the diagnostic phase of the study.

The purpose of the study is defining the state of dyzontogenezis of speech mentally retarded children.

The achievement of the goal on the diagnostic stage has contributed the following tasks:

- to define the status of the system components of language and speech (Kornev) in mentally retarded children of primary school age;
- to definition of evaluation criteria for all violations of language and speech system;
- to diagnose the condition of speech development and define the basic fundamentals of speech activity of children of primary school age;
- to reveal the structure of the speech defect mental retardation
- to establish the dependence of formation of the state of the speech patterns of the degree of mental retardation and the presence of pathology;
- to develop a model and methodology set of studies and diagnostics features of language development of mentally retarded children at primary school age;
- to determine the effect of the speech disorders in children with mental retardation in the formation of cognitive processes, affective-emotional sphere of the person;
- to identify the factors influencing the process of raising a child of the person with mental retardation.

The purpose and direction of the diagnostic steps:

**Stage 1:** Symptoms Diagnostics.

**Goal:** to determine the presence or absence of violations in speech development (taking into account the norms of speech at a certain stage of development).

**Stage 2:** Diagnostic of speech development.

**Goal:** to determine the symptoms of common dyzontogenezis based on the result of psychology-pedagogical screening, taking into account the conclusions of the medical profession: psychiatrists and neurologists.

**Stage 3:** Syndromes diagnostic.

**Goal:** to make an analysis of all the violations.

**Stage 4:** Diagnostic of quasi-ontological. Identify specific forms of speech in mentally retarded children.

**Stage 5:** Correction of speech.

The main principles in this study were:

- clinical and pathogenetical (causality), the principle of causality, what explains the causal relationships of occurrence of speech disorders;
- the principle of multidimensionality or multifactor speech diagnostics, which means that the definition of one of the few indicators to measure the level of speech development;
- the principle of multidisciplinary and complexity means that in the diagnosis of speech disorders use means and methods of disciplines that are relevant to the issue of development of a child with mental retardation, that allows you to integrate knowledge from different sides of the subject matter;
- systemical-functional principle explains the study of language development of mentally retarded children as a single functional system, approach to this study to determine the direction for the type of complications;
- the principle of dynamic study of the child: under the dynamic study, we understand the definition of the level of language development at different age stages;
- the principle of individual approach and measured the load at the time of the survey and further developmental work;
- the principle of qualitative and quantitative analysis of the experimental result.

### 3. The justification of experimental research methods

Semiotics of dysontogenetic speech disorders in MRC provides pre-leveled analysis: symptomologic (descriptive) and syndromologic (integrative and interpretational). Considering the peculiarities of diagnostic process logic we adhere to the principle of separation of linguistic-pathological description of symptoms and syndromes of speech disorders in mental retardation, whereas the study, description and classification of clinical and psycho-pedagogical symptoms and syndromes, of course, requires

consideration of age and ontogenetic aspects of such analysis. This aspect was taken into account during developing of strategies and tactics of the diagnostic phase of the research. Considering the complexity of speech development disorders caused by mental retardation we developed the diagnostic phase of the research taking into account disciplinary integrated approach to the study of the characteristics of speech development in MRC which, in turn, presupposed the investigation of the entire spectrum of pathological manifestations that accompany the child development and describe her personality (including neurological, logopedic and psychological characteristics).

In particular, the problem of interdisciplinary investigation of speech in MRC and determination of speech disorders places in mental retardation in modern systematic of speech disorders remains unsolved.

Determining the structure of speech disorders in mental retardation is one of the extremely complicated problem of logopedic science and it is caused by the fact that this speech pathology has many characteristics: morpho-functional, psycho-neurological (neurological), linguistic and social.

In our opinion, systemic speech underdevelopment (SSU) is a separate, independent group of disorders that should be considered within the psycho-pedagogical classification of speech disorders.

In our investigation, we identify systemic speech underdevelopment (SSU) as a variety of complex speech disorders under which formation of all components of the speech system is broken. These components relating to its audible and semantic sides are caused by intellectual disabilities or lead to its violations.

Modified research methodology by A. Kornev, 2006 ("Systemic analysis of children's mental development with speech hypoplasia") (Kornev, 2006); S. Konoplyasta, 2010 ("Investigation of speech and mental development of children with congenital anomalies of lips and palate") formed the basis of development and justification of experimental technique of ascertaining research phase (Konoplyasta, 2010).

The purpose and direction of the diagnostic process stages:

1. The first stage – the stage of symptomological diagnosis. The objective: to determine the presence / absence of abnormalities in speech development of MRC (considering speech standards at a certain stage).
2. The second stage – the stage of speech activity diagnostic. The objective: to establish the general characteristics of dyzontohenez on the basis of clinical and logopedic analysis (taking into account the conclusions of the medical specialists (neurologists). Considering the investigation of this problem from the point of view of systemic position, it was supposed to determine the level of speech development of a child with mental retardation; to determine the scope, structure and level of

dizontogenetic disorders and the place of speech symptoms in the general context of dyzontogenez. The interpretation of the non-speech functions not as a background but as a systemic context of discovered speech symptoms was fundamentally important in this investigation stage. We believe that the speech system is structural and complicated formation that combines the qualitatively different components, subsystems, thus requiring investigation of these components based on their specific autonomy in the development. The functional system of language and speech of MRC which was defined and justified by A. Kornev was taken as an investigation basis (Kornev, 2006). This is why the algorithm of constational research at this stage supposed separate diagnostics of qualitative and quantitative evaluation of phonetics and phonology (segmental and supersegmental levels), their articulation base, syntax and morphology (evaluation of the formation level by quantitative and qualitative scale).

3. The third stage – the stage of syndromologic diagnostics was aimed to implement syndromologic analysis of the totality of revealed symptoms, determination of speech development disorders mechanisms, factors that determine this or that a version of speech dyzontogenez.

For the implementation of the purpose and objectives at each stage of the investigation in order to test the hypothesis regarding speech development in children with mental retardation of primary school age, in our opinion, the following methods were relevant:

- theoretical: analysis of training programs and manuals to determine the theoretical and methodological foundations of research, the development of corrective programs for the development of speech;
- empirical: clinical analysis (retrospective study of illnesses and anamnesis data), psycho-pedagogical analysis (card processing of logopedic and psycho-pedagogical examination, educational documents, observation) in order to identify the features of psychomotor and speech development in mentally retarded children of primary school age;
- pedagogical experiment of proper character for determination of mechanisms and structure of speech dyzontogenez, development levels of functional system of language and speech and determination of future directions for the development of an integrated forming and correction method of speech activity of mentally retarded children of primary school age.

#### **4. Interpreted investigation results of speech activity in mentally retarded children of primary school age**

According to the Order of ME of Ukraine (from 15.09.2008 № 852) On approval of special secondary school (boarding school) for children requiring correction of physical and (or) mental development to a special school (boarding school) for mentally retarded children counted mentally retarded children 6 (7) years and children with an appropriate diagnosis with medical indications: mild mental retardation (F70.0, F70.1); mild mental retardation (F71.0, F71.1); Organic dementia of different origin, which corresponds to mild to moderate mental retardation (Borjak, 2015).

According to data of medical, psycho-pedagogical documentation (medical records, conclusions of psychological, medical and pedagogical consultations, health cards) mentally retarded pupils of primary school age (total number – 410 people from 6 to 12 years: pupils of 4 classes). The age group of the respondents was as follows: 93 students of preparatory classes, 82 students of the first class, 85 students of the second class, third class of 64 students, 84 students of the fourth grade 1 and 2 divisions (with mild to moderate mental retardation). It was established that:

1. Accompanying disorders of mental development during mild mental retardation (F70.0) – I department. It was processed documentation of 234 persons and it was revealed: uncomplicated mild mental retardation – 55%; autism abuse (F84) – 10%; expressive speech disorder (F80.1) – 9%; epilepsy (generalized) – 9%; CP – 6.4%; obsessive compulsive movements – 6.4%; Down Syndrome – 4.2%. In addition to neurological symptoms, it was found that the majority of MRC of primary school age inherent visual impairment. In 105 persons (44.9% of the total number of people) it was found: hyperopia – 34.3%, astigmatism – 25.7%, strabismus – 22.9%, myopia – 14.3%, amblyopic – 2.8%.
2. Accompanying disorders of mental development at moderate mental retardation (F71.0) – the second division. It was processed medical and psycho-pedagogical documentation of 176 persons. It was revealed: uncomplicated form of moderate level of mental retardation – 61% Down Syndrome – 22.2%, obsessive-compulsive movements – 11.1%, impaired autism spectrum (F84) – 5.5%. Expressive speech disorders (F80.1) was found in 33.3% of children.

The prevalence of disorders of the visual analyzer among this group is also dominant: it was identified 57 pupils with visual impairment (62% of people), it was revealed: with astigmatism – 45.4%, strabismus – 27.3%, hyperopia – 18.1 % myopia – 9%. In our opinion, the accompanying neurological symptoms in mental retardation will impose specific complications on forming and correcting of various components of

speaking in mentally retarded children, both oral and written speech. According to the results of the investigation it was identified the following speech disorders which are inherent MRC of primary school age.

Determining the current level of speech activity was carried out in the following areas: phonetic aspect of speech (pronunciation of sounds); level of development of phonemic processes: Maturity of operations sound analysis and synthesis, components analysis and synthesis; lexical aspect of speech: the volume of the dictionary (as active or passive), the grammatical aspect of speech analysis, synthesis, inflection, word formation, grammatical generalizations; the level of development of coherent speech.

The level of writing and reading skills has been identified of pupils of 2-4 classes. The level of speech development consisted with sufficient, medium, low, and initial, they had both quantitative and qualitative indicators. Levels of speech development determined speech disorders in mentally retarded children on the grounds of systemic underdevelopment of speech 1,2,3,4 degrees (Boryak 2013). According to the study, it was determined that among the initial classes of special education students for mentally retarded children an adequate level of language development was observed in 31% (57 students grade 1) and 10% (23 students grade 2); average: 49.7% (91 students grade 1) and 23,4% (53 students grade2); low: 19,5% (35 students grade 1) and 34,8% (79 students grade 2) ; primary – 31,8% (72 students grade 2), among students 1 grade primary level language development have not been found.

To ensure the multidisciplinary care in the system of complex correction of speech development of mentally retarded children of primary school age have been developed in three main directions correction-developmental program.

The first is the general direction, which provides for the content of the correction technology. These technologies help to overcome problems of speech development, which are available for all children with mental retardation. The second is based on the differential provision of overall development of children with different forms of speech dizontogeneza. The third is the development of algorithms for individual-specific development of each child with mental retardation.

In our study, correction and enrichment programs the formation of speech activity of mentally retarded children of primary school age, we present a system of complex speech therapy effects. This system covers the speech development of children, harmonization of personality and cognitive potential, and the full socialization of children in today's society.

Basic principles of the system: general methodological specific methodological principles of psychological correction. General methodological principles: reflection, of determinism, of the unity of consciousness and activity. Specifically methodical: an

integrated approach to the study of children with mental retardation; unity diagnosis and correction.

Principles of psychological adjustment: the principle of taking into account the structure and mechanisms of violations of the functional system of language and speech; gradual and uninterrupted speech therapy and pedagogical correction; hierarchical principle psychoverbal correction; causal principle of correction (registration causes, mechanisms and structures psychoverbal dizontogeneza caused mental retardation); the principle of developmental orientation; active approach and the principle of taking into account the leading type of age; the principle of the integrated use of different types of activities and differentiated approach.

Methods of complex correction of speech development of younger school-age children with mental retardation is made up of author's techniques and teaching methods. And adapt appropriate techniques correction-developing training and language development of children with speech impairments. This system is based on neuro-linguistic, neurobiological, linguistic pedagogical and psycho-pedagogical directions of modern scientists E. Arhipova, S. Blokhin, T. Volosovets, T. Dateshidze, A. Kornev, C. Konopljastyj, R. Lalaeva, L. Lopatin, N. Serebryakov, B. Tarasun.

Methodological basis developed correction- developing system has a modern concept of ontogeny and dyzontogeneza speech development belongs to A. Korneva, the morphofunctional concept of readiness of children with disabilities to school (B. Tarasun) and other more appropriate in terms of interdisciplinary multifactorial approach.

The corrective developed-developing system is represented in the form of software-methodical complex speech development of younger school-age children with mental retardation is designed for students of preparatory classes with mild to moderate mental retardation. Using a program-methodical complex is designed for lessons for the development of speech, charges according to the State program, 4 hours per week.

The program-methodical complex taken into account:

- A) features available of somatic and psychic easing neurological symptoms;
- B) the main types of verbal and mental development, depending on the dominance of a functional system of psychological and pedagogical characteristics. These features of speech and intellectual development (disturbances in speech, motor and motor, intellectual, emotional and social development) pattern during the complex remedial work should be based on these principles:
  - a. At an individual approach.
  - b. At maximum activity of children in the process of interaction with teachers-pathologist and other specialists.

The high level of effectiveness of corrective development is ensured by the implementation of corrective training of mentally retarded children of individual programs.

The complex is divided into sections:

1. Explanatory Note;
2. Normative indicators of speech development of younger school-age children;
3. Characteristic of speech development in primary school children with mental retardation;
4. The program of correctional training of primary school-age children with mental retardation on the development of speech;
5. Guidelines for correctional training school-age children with mental retardation on the development of speech;
6. The speech material.

Program-methodical complex is designed to meet the content and direction of corrective training of primary school-age children to develop speech and have a common link in the system of correctional and developmental education of children with mental retardation.

## **5. Conclusion**

The study of the theory and practice of formation of speech of mentally retarded children of primary school age the following conclusions:

1. The problem of mental retardation remains quite acute and urgent at the present stage of development of special education, both in Ukraine and abroad.
2. Complexity correctional developmental defect due to the complexity of the structure in mental retardation. Because the cause of this defect explains irreversible violations of human cognitive processes, their persistent nature.
3. Almost all cases of mental retardation is characterized by disorders of speech development, which can be classified as sufficient, medium, low, and initial levels.
4. According to the study, it was determined that among the initial classes of special education students for mentally retarded children an adequate level of speech development in 31% (57 students grade 1) and 10% (23students grade II); average: 49,7% ( 91 students grade 1) and 23,4% (53 students grade II); low: 19,3% (35 students grade 1) and 34,8% (79 students grade II); primary: 31% (72 students grade II) among students 1 grade primary level language development have not been found.

5. The program-methodical complex has been designed with the aim of forming and (or) the correction of speech activity of mentally retarded children of primary school age, which consists of the following sections: 1. The explanatory note. 2. Normative indicators of speech development of younger school-age children. 3. Characteristics of the speech of primary school age children with mental retardation. 4. The program of correctional training of primary school-age children with mental retardation on the development of speech. 5. Guidelines for correctional training school-age children with mental retardation on the development of speech. 6. The speech material.
6. Basic direction of formation and correction of speech activity of mentally retarded children of primary school age are identified: 1. development of lexical and grammatical aspects of speech. 2. Development of phonetic FGTS phonemic aspects of speech. 3. Development of coherent speech. 4. The development of written language.

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