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## **THEORETICAL FRAMEWORK OF DEVELOPMENT OF METHODOLOGY FOR COMPLEX PEDAGOGICAL DIAGNOSTICS OF AUDITORY-VERBAL DEVELOPMENT IN CHILDREN WITH HEARING IMPAIRMENTS**

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Scientific substantiation and development of the complex pedagogical diagnostics of auditory-verbal development in students with hearing impairments based on implementation of the functional approach is one of the challenging issues of the deaf education. Today, level of auditory-verbal development is one of the major factors determining the educational route of a child with hearing impairments, his/her learning opportunities, and in the future, it will determine his/her freedom to choose the profession and job, his/her quality of life [3; 4; 5; 6].

The quality of medical and technical rehabilitation and its effect on development of children with deprivation of hearing is a significant factor. The modern stage is marked by active development and implementation of methodology for early objective medical diagnostics of hearing status, by achievement of sufficiently high degree of hearing loss compensation using high-technology hearing aids. However, as it is stressed by Löwe A., Rulenkova L.I., Smirnova O.I. et al., introduction of such measures does not ensure self-development of auditory-verbal skills of a hearing-impaired child [6; 9]. It should be noted that medical diagnostics results are mainly quantitative in nature, do not provide the complete data required for remedial action planning. While demonstrating similar dynamic and frequency audible ranges, children may have distinctly different functional auditory-verbal skills [8].

Analysis of the current state of methodology for the pedagogical diagnostics of hearing-impaired children development has revealed that hearing and speech study methods are applied separately [4; 5; 8; 9]. No complex study of auditory sense and speech development processes with reference to each other has been carried out.

It should be noted that generally the designed methods of pedagogical hearing diagnostics define the possible differentiation of speech elements in the context of “restricted” choice, i.e. using limited amount of speech material. Even if the method provides for reproduction of texts for auditory perception, the results are evaluated based on description of “hearing errors” only (omissions, distortions, or substitutions of certain parts are recorded).

The pedagogical diagnostics of speech development in students with hearing impairments is also aimed at evaluation of individual speech components:

vocabulary, grammatical structure, and pronouncing skills. We are not denying the need to implement the “analytical approach”. Meanwhile, as the researchers emphasize, knowing words and certain grammatical forms does not set conditions for their conscious use in active speech [3; 5; 8]. We believe that evaluation of functional capacities to use speech as a means of communication and cognition should become the primary target of the pedagogical diagnostics.

Analysis of the existing methods also points to the fact that a very important criterion, understanding, is dropped out of sight of the pedagogical diagnostics of auditory-verbal development in students with hearing impairments. In our opinion, unsubstantiated identification of speech perception and understanding occur quite often: “he/she hears, so he/she understands”. However, when we refer to children with hearing impairments, we consider it necessary to differentiate between “perception” and “understanding” components. Let us clarify this through examples.

On the one hand, in case of inadequate hearing loss compensation using hearing aids, some children are unable to perceive individual speech elements for the term of their life. In such event, even under ideal acoustic conditions, a child will perceive, for example, the word “dog” as “og”, i.e. auditory image will be “reduced”. But an auditory image is associated with a certain object in memory, a word graphic image, and this allows the child to perceive it correctly in the future (by “completing” the wrong auditory image), to understand its meaning, and to use it in his/her own speech adequately.

On the other hand, even a high level of hearing loss compensation (e.g., using cochlear implant) does not guarantee the speech “sense perception”. Similarly to a hearing person who is able to repeat the words and phrases in a foreign language after the interlocutor accurately without being aware of their meaning, at the certain learning stage, a child with hearing impairments is able to reproduce the speech element without knowing its meaning.

Consequently, notions of “differentiation of speech elements by ear” and “understanding” are not always correlated. Therefore, at the beginning of teaching, we should know what conclusion is correct: “does not perceive – does not understand – does not reproduce”, “perceives adequately – does not understand – does not reproduce”; “perceives reduced – understands – reproduces with distortions”; “perceives adequately – does not understand – reproduces”, etc. We could obtain these data based on the complex pedagogical diagnostics.

The situation is slightly transformed in the context of active speech status evaluation issue. In our opinion, it is important to get answers to the following questions: “What components are to be included into the structure of child’s active speech status evaluation?”, “Is evaluation of individual speech components (vocabulary, grammatical structure, and pronouncing skills) adequate?”, “What criteria and values should be taken into account?”, etc.

Evaluation of passive and active vocabulary, and assessment of speech grammatical structure and pronunciation of children are traditional and, surely, important components of the pedagogical diagnostics. However, knowing meaning of certain words and their grammatical forms does not mean understanding of their sense in the sentence, and understanding of meaning of individual sentences is not the

evidence of connected text sense understanding. Special studies also point out to the fact that learning and using “clichés” is quite common to children with hearing impairments, and this not always allows for evaluation of their actual speech development level. This fact highlights the need to review approaches to defining diagnostics techniques, criteria and values of assessment of speech development in students with hearing impairments.

In view of the above, we believe that development and implementation of the complex approach to the pedagogical diagnostics of auditory-verbal development of hearing-impaired children providing not only and not so much for evaluation of individual components, but also for detection of relations between them, establishment of correlation and hierarchy of auditory-verbal development disorders is a pressing issue.

As Zhinkin N.I. has noted in his study, *Speech mechanisms*, “we should find such instructional techniques and means which could allow approaching the study of speech mechanism in a diversified and focused manner at the same time so that we could examine its essential parts” [2, p. 135]. Extending such point of view to scientific field of our study, we may talk of the need and expediency to develop the pedagogical diagnostics of auditory-verbal development in children with hearing impairments in order to examine relations between triad components “perception – understanding – reproduction”, and to do the same with the maximum focus thereon.

In our study, we proceed from the point that at the modern stage text is used as primary source of information and training resource. As Dridze T.M. highlights, “text teaches, directs, generates ideas, aims, values, programs behavior strategy” [1, p. 36]. In view of the special role of the text as a training resource, we believe that it is reasonable to consider the text as a means of diagnostics of auditory-verbal development in children with hearing impairments as well.

Thus, the text content gives a fairly comprehensive picture of functional capacities of a child’s auditory sense: differentiation of speech elements (words, phrases, sentences) within the structure of connected text describes the child’s potential skills to perceive the interlocutor’s speech in the natural communication environment. Nevertheless, it has been proved that perception of isolated words or phrases, especially in the context of the “restricted choice” as it is provided for by most existing methods, is a much simpler task as compared to their identification in the auditory flow where neighboring components have influence on the successful perception as well [2; 7]. Analysis of such perception results provides a teacher with the opportunity to assess “hearing errors” of children, as well as to establish the possible reason thereof. Meanwhile, it is possible and necessary to include traditional tasks into the examination in order to form “restricted list” of different complexity level based on the text content (taking into account frequency and dynamic word range, word rhythm, phonetic association degree; including different number of elements for differentiation into the list; providing for inclusion of speech element variations (in order to exclude “guessing” based on outward signs).

It is possible to evaluate the understanding of the perceived message based on the text content, and from two sides with different complexity levels: “understanding-recognition” (based on fact analysis of speech material) and “understanding-

hypothesis” (formed skill to establish cause-and-effect relations, hidden correlations, make conclusions).

It is possible to study the active speech of a hearing-impaired student in the context of “text model” as well. Reproduction skills are assessed based on the text content provided for perception. Tasks for studying meaningful statements are planned subject to personal experience and interests of a child. Based on preliminary assessment of the child’s speech development, visual aids in a form of subject images or series of subject images, line of objects, various versions of retelling / telling plans may be used. It will be important to define and subsequently record different options of “assistance” to the child in the course of examination.

Furthermore, we believe that the special consideration should be given to defining criteria and values for assessment of connected statements. As a rule, the existing recommendations provide for evaluation of the amount of the connected text reproduced by a child, and lexical and grammatical means used. In our study, when defining key criteria for assessment of the connected monologue, we are guided by the characteristics highlighted by Leontyev A.A., i.e. connectedness and integrity [7]. The used unity types highlighted by Zikeev A.G. serve as main criteria for assessment of the connected dialogue [3].

Consequently, at the modern stage we consider it reasonable to develop and implement the complex methodology of the pedagogical diagnostics of auditory-verbal development in children with hearing impairments based on study and evaluation of children’s functional capacities of auditory sense and speech perception, detection of relations between triad components “perception – understanding – reproduction”. The need for modification of the available considerations is driven by material medical and technical changes creating conditions for formation of conceptually new auditory-verbal capacities of children with hearing impairments. The urgency of developing new approaches to the pedagogical diagnostics derives from its special role in defining the strategy for pedagogic work with a child, conditions of his/her teaching and upbringing at different education stages.

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