Diagnostics of language competence in children with language disorders

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Abstract

The diagnostics and differential diagnostics are very important for the speech and language therapy. The correct logopedics diagnose for disorders with similar symptoms is the core of the right lodpedics therapy. The problems with the terminology in nowadays speech and language pathology result in difficulties for the specialists to determine the proper diagnose. The different terms in some disorders are result of using works from east and west authors. This problem in speech and language disorders' terms generates this project idea for creating a frame of diagnostic and differential diagnostic in language disorders.

Key words: diagnostics, differential diagnostics, language disorders, logopedics, terminology problems, language competence

Introduction

The diagnostics of all language disorders is in straight dependency of the symptomatology and the pathogenesis. According to the classifications used by the Russian Logopedical Society the speech disorders are mainly understood as bipolar terms of alalia and dyslalia. In this context the diagnostics as well as the differential diagnostics help just for definition of the symptomatic marks defining this terminology.

The Western Logopedical Society observes and classifies the language disorders according to five different linguistic characteristics. The 5 basic language components are: phonology, morphology, syntax, semantics, and pragmatics. This model is a part of a project about formulation of a common standard for diagnostics , and differential diagnostics of the language disorders in the context of the problems of logopedic terminology.

All the facts listed above provoke the idea of creating dynamic diagnostic methods for research of the language competency. It is logical protection of the fact that all classical, modern, and alternative systems for language teaching of children with communicational disorders are based not just on the linguistics researches, but also upon its related scientific areas as psycholinguistics, social linguistics, semiotics, and logopedics.

The formulation of the dynamic diagnostic methods (DDM) is the main part of the idea for creating a therapeutic methods for work with children experiencing communicational disorders. They have to be formulated according to the frequency of occurrence of words in frequent children's speech. If during the speech therapy at first are used the words with the most usage, and if the further vocabulary development is being built according to the frequency of occurrence as well, all this helps for creating an optimum environment for achieving more efficient and faster results out of the speech therapy. Reports before, during, and after the therapy are made according to the requirements of on-going diagnostics in the process of the therapy.

In order to realize the project idea I use the dynamic- contextual method. According to it, learning of language passes in real situation in the process of it's activity and as a totality of means expression at the same time (as speech activity).

The essence (the main point) of DDM is a test battery for (about) language competence.

DDM consists of three parts:

1. DDM for Impressive speech
2. DDM for Expressive speech
3. DDm for grammatical structure

The dynamic of the language divelopment is discussed in two aspects:

Frequency range, set in frequency characteristic of the words.

Age range, set in age category.

The idea of following and reporting the dynamics of the language development is in compliance with the dynamic nature of the language development itself. In this context, the dynamics in the aspect of the frequency diapason is built on the frequency characteristics or the frequency of occurrence (usage of stimuli-words as well). The primary basis of the dynamics is the main principle according to which the words with the highest frequency occurrence are the most accessible during the early child onthogenesis. Therefore during the later stages of development some words with less frequency of occurrence appear. This is the reason why the dynamics of language development is inversely proportional to the frequency characteristics of the stimuli-words.

Regarding the frequency of occurrence of stimuli-words found in the child's speech I accept the following structure for all parts of DDM:

- I part – high-frequency part;
- II part – intermediate-frequency part;
- III part – -low-frequency part.

T**hese parts are not only parts for itself. They provide higher efficiency in diagnostic, and therapeutical work, as far as they enable following the fundamental didactics principle for movement from simple (high- frequency) to complex (low-frequency).**

High frequency structure includes most often used words in child speech, the medium frequency moves in medium borderlines, and analogically low frequency includes the rarest used words. These frequency borderlines are conditionally determined, but in principle conditioned frames landmarks for dynamic tracing of child's language development in children with communicative disorders, as well as in children of the same age without specific features in ontogenesis development.

DDM is diveloped for four age categories:

- I age category 3.6 – 4.5 years old
- II age category 4.6 – 5.5 years old
- III age category 5.6 – 6.5 years old
- IV age category 6.6 – 7.5 years old.

Each of the three frequency parts of DDM consists of 7 structural elements, which correspond to exactly defined parts of the speech, as one of them has two modules.

- Nouns
- Verbs
- Adjective A (color gnosis)

Special place is set to color gnosis, because contemporary programs pay great attention to it.

- Adjective Б
- Adverbs
- Pronouns
- Prepositions

In **order** to achieve the index of reliability in the process of validation and standardization of the dynamic diagnostic method for language competence, constructing of the entire method, as well as the reporting the results are based on the idea of universality, systematization and continuity.

Children of 87 groups from 27 educational institutions in 11 towns in Bulgaria took part in the examination. They were allocated in the following age ranges:

- 2.2 - 3.5 - Day nursery;
- 3.6 – 4.5 - I group of nursery school;
- 4.6 – 5.5 - II group of nursery school;
- 5.6 – 6.5 - III group of nursery school;
- 6.6 – 7.5 - IV group of nursery school.

Subjects: Total of 923 children (439 girls, 476 boys) of the five age groups took part in the examination. Total of 84 (35 boys, 41 girls) children of day nursery age also participated in the examination. Children of the first and second groups are allocated almost equally. In the first group they are 192, and in second 200. Most of the girls belong to the second group- 99, in comparison to first- 83. The group of the boys is oppositely presented: boys of the first group prevailed - 109 in comparison to 101 for the second group. Most concentrated is the third group- total of 243, as girls and boys are allocated almost equally- 123 girls and 120 boys. The forth age group consists of 204 children, where boys are 99, and girls 105.

Results and disscusion

The average values (AV) and standard deviation (SD) were calculated for all children for each of the three frequency tests. Analogical calculations are made for 84 words- stimuli in each of the three frequency tests. The differentiation is made according to two indicators: age and sex.

Първичната обработка на резултатите показа сериозно разминаване между стимулната позиция спрямо теоретичната постановка на проблема и тази след практическото приложение на теста.

Primary result processing showed deep separation between stimulus' position towards theoretical setting of the problem and the position after practical application of the test.

Stimuli position and their movement as a result of empirical data in all age groups and gender differentiations between them is presented by three stage's point of view:

•Initial stage- based upon the theoretical setting

•Intermediate stage- visualizes intermediate condition, through displacement of positions of the stimuli material as a result of practical setting

•Final stage- presents the results as a final variant of the test after it's practical realisation

For explaining dynamism in DDM I introduce two new terms in order to present figuratively the movement in position of selected words- stimuli. I will use the term "migration" in order to trace in systematic order the previously outlined problem. For precision of the analyses and conclusions "migration" is traced in internal and external aspect. "Internal migration' is considered as a movement of certain stimulus inside the defined frequency range according to its theoretical setting. "External migration" is considered as the position of certain stimulus in other two frequency ranges.

Inference

In the first age category none of the stimuli saves its initial position by the theoretical setting, and the external "migration" prevails. This conclusion by itself predetermines a dynamic stereotype of influence of stimulus elements in the constructive frame.

In the second age category things are analogical to the first category, so again, external "migration" prevails. The dynamic character of the constructive frame of age and frequency aspect is highly stereotype expressed.

In the third age category most highly expressed is the external "migration" in high-frequency range in direction to the two others frequencies, as predominant place take displacements towards medium-frequency range in both directions. Most highly expressed external "migration" of the medium-frequencies towards higher is monitored in the group of adjectives- type B.

In fourth age category external "migration" continues to be predominant for most words-stimuli, in both directions.

Dynamics in stimuli displacement is evident in the fifth age category also. In categorical way this tendency pays attention to constructive frame of DDM and it's process of validation.

Conclusion

The results showed that the developed constructive frame of DDM is able to report, the dynamics of language development in children of pre-school age, including those with language disorders. The analysis made arguments and proves the assumption, that in contents relation DDM should be in compliance with the frequency features of selected words-stimuli, in the opposite way the constructive frame could not reflect the dynamics in language development. The hierarchic structure set in the constructive frame of DDM ensures reflecting of dynamics in the language development in children with language disorders. The fundamental inference that can be made is that such elaborated constructive frame of DDM can reflect dynamics in language development in two directions:

-age dynamics;

-frequency dynamics, based on the frequency of lexica in pre-school age children.

This is a prerequisite for creation (development) of standardized and normative diagnostics method for diagnostics of language competence in children with communicative disorders.

Finding out logical and scientific reasoned explanation of that stimuli "movement" with defined frequency characteristics based on theoretical postulates is necessary.

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