

## SOFIA UNIVERSITY MARKING MOMENTUM FOR INNOVATION AND TECHNOLOGICAL TRANSFER



# MODEL OF EVALUATION OF RECEPTIVE LANGUAGE IN PRESCHOOL AGED CHILDREN

Research Group: Department of Logopedics Research field: Speech and language pathology

Project guidelines

The aim of the project is to develop a model of evaluation of receptive language in Bulgarian children aged 4;0-4;11.

The diagnostic tools available in our country for assessing early language development mainly focus on the state of children's expressive language ability (as in Diagnostics and prevention of language 3-4, D.P.E. 3-4, Stoyanova, Yosifova, Poppandova, Netsova, 2010; VERBA-2, Andonova 2022a, 2022b). This explains the need to develop and test a detailed diagnostic model for evaluating receptive language abilities at the main levels of the language system lexical, morphological and syntactic. The material presents the conceptual framework of the first in our country hierarchically structured Model for the evaluation of receptive language in children with typical development at the age of 4-5 years. The purpose of the model is to derive age norms for decoding and understanding the Bulgarian language, which have a high prognostic value for the early diagnosis and prevention of children at risk of future learning difficulties.

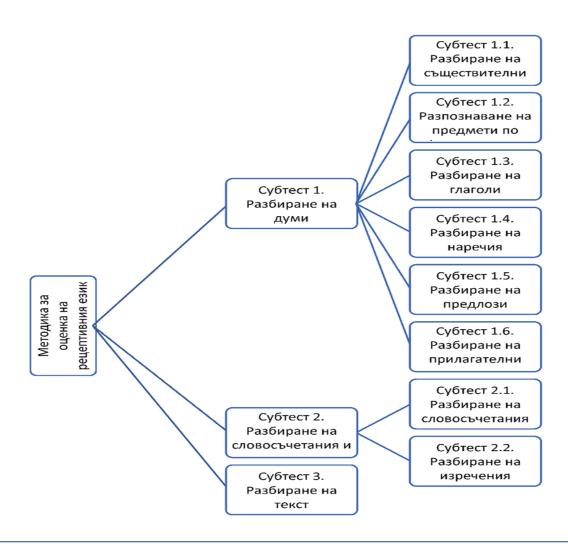


### Introduction

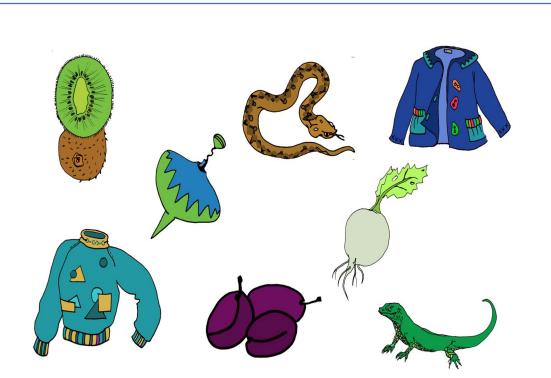
The beginning of the preschool period (4-5 years) is a time of active formation and improvement of the neuropsychological mechanisms of the main linguistic levels of spoken language (phonological, lexical-semantic and grammatical) in their two main aspects - receptive (perception and processing of verbal information) and expressive (language encoding and generation of independent utterances). However, the existing diagnostic procedures, both in Bulgaria and worldwide, mainly focus on the state of children's expressive language skills. The processes related to the perception and processing of linguistic information often remain outside the attention of specialists. The probable reason for this fact is that in the development of children's language, perception and understanding precede expressive abilities. This unproven claim directs researchers' attention to the realization of children's language skills at the expense of the state of impressive language. It is known that there are variants in which children remember and use "pattern expressions" without a sufficient degree of understanding. Incomplete decoding of grammatical forms is most fully highlighted in the process of speech therapy diagnostics and has a high prognostic value regarding both the oral and written language of children. In the literacy period, similar type of deficits have a negative impact on reading skills related to decoding and understanding of written texts. The difficulties multiply as the volume and complexity of the learning texts increase during the different stages of schooling.

### Methodology

The selection of tasks in the creation of the methodology follows a model based on the structuralist concepts of hierarchical level organization of the language - from the word, through the word combination and the sentence to the connected utterance. The methodology consists of 3 subtests, including a total of 31 samples and 134 items.



Each of the subtest samples is located on a separate picture board. The boards are presented sequentially together with an instruction relevant to the category under study (nouns, verbs, adjectives, adverbs, prepositions). Only a non-verbal response is required from the child - by pointing. Assessment in the battery is by assigning points. For each correctly identified item, the child receives the maximum number of points. If a wrong answer is given or no answer is given after three consecutive presentations of the instruction, the score is 0 points. The obtained results are plotted in a protocol, the design of which allows easy quantitative and qualitative analysis.



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#### Results

At the stage of pilot approbation, the content validity of the methodology was established. Content validity is determined by two indicators: as an average percentage of the expert assessment of the homogeneity of the tasks and the assessment of how far they cover the criteria set in advance in the methodology (Kozhuharova, Ganchev, Delchev 2022). To prove the content validity of the model an expert assessment procedure was carried out through a survey. The survey contains a total of 18 questions, divided into three thematic sections as follows: section A. Content and criterion validity; section B. Difficulty and homogeneity of tasks (items); section C. Structural validity. The experts (n=7, 3 men and 4 women) are highly qualified and experienced in the field of language development in normal and pathological conditions. The results of the survey show a positive assessment by all experts, in the individual thematic areas of the questions and of the survey as a whole. The average score for area A. Content and criterion validity is 42.85 points (max. 45 points) or 95.2%. For area B. Difficulty and homogeneity of the tasks (items) the obtained result is 33.85 points (max 35 points) or 96.71%, and for area C. Structural validity the obtained result is 100%. The average total score of the expert evaluation of the battery was 86.71 points (max. 90 points), or 96.34%, which confirms the content validity of the M.O.R.E. 4-5. Apart from the percentage result of the expert assessment, the Losi coefficient was calculated to check the criterion validity of the methodology. The obtained value (CVR=1) shows the absolute maximum in the coverage of the indicator. In the pilot testing stage, the methodology was proposed to 20 children with typical development between the ages of 4.0 and 4.8 years to determine the validity of the picture stimulus material used. The sample was selected among children with typical development (12 girls and 8 boys) attending a full-day kindergarten.

#### Conclusion

The goal to cross-check the recognition of picture material by naming and by pointing was achieved. The obtained results show excellent recognition of the items by the children in the target age group, as well as a complete correspondence between the image and the stimulus word. This, together with the excellent validity of the model, allows to start the main phase of the research. Deriving norms for language comprehension will enable preventive work to be carried out in relation to early indicators of learning and literacy disorders. This will benefit both speech therapy and pedagogical interactions.

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