

Abstract

My dissertation is entitled “Child's memory and words’ synthesis from phonemes at the stage of preparation for learning to read and write” and the purpose of the study is to determine whether there is a positive correlation between the functioning of memory and the ability to synthesize words from phonemes, and the impact of the short-term memory on the phoneme synthesis in a group of early school children.

My research questions and hypotheses are as follows:

1. Is there a positive correlation between indicators of memory and words’ synthesis from phonemes before improving efficiency of synthesizing and memory?

H 1: There is a positive correlation between the indicators of memory and words’ synthesis from phonemes before improving efficiency of synthesizing and memory.

2. Is there a positive correlation between the indicators of memory and words’ synthesis from phonemes after improving efficiency of synthesizing and memory?

H 2: There is a positive correlation between the indicators of memory and words’ synthesis from phonemes after improving efficiency of synthesizing and memory.

The main hypotheses of my research have led to the formulation of the following specific research problems:

1. Is sex the moderator of the relationship between indicators of memory and words’ synthesis from phonemes?
2. Is age the moderator of the relationship between indicators of memory and words’ synthesis from phonemes?

The dependent variables in the study are:

- the degree of mastery of words’ synthesis from phonemes.
- the level of short-term memory (the second test).

Indicators for these variables are as follows: the number of synthesized words and test memory results.

Independent variables in the study are:

- the method of stimulating child development used by teachers during school classes.

- the level of short-term memory and the degree of mastery of words' synthesis from phonemes, before re-testing – Phase I.

In the first experimental group there were 150 respondents. In the second experimental group there were 60 respondents. A thorough analysis of the relationship between sex and age of the children revealed that the age of boys and girls in the full study sample of children did not differ significantly. You could say that the test group was well-matched in terms of gender and age distribution, at the first and second stage of the study.

The examined children attended preschool and first class of primary schools located in Gdańsk, Bielkówek, Iława, Oborniki Wielkopolskie and Poznań. Students knew what words' synthesis from phonemes is.

The course and organization of proper research:

- the first stage of the study consisted of three parts: the verification of words understanding, determining indicators of memory and assessing the level of words' synthesis from phonemes.
- the second stage of the study was to re-determine the indicators of memory and assess the level of words' synthesis from phonemes.

The results of the analysis show that there is a statistically significant, but moderately strong correlation between operating memory and words' synthesis from phonemes ($r = .47$; $p < .001$), where the higher the memory level, the higher the synthesis level of phonemes. It may be noted, however, that operating memory, although significantly related to the level of phonemes synthesized in words, only accounts for about 22.1% of the variation in synthesis results. 28.3% of the respondents improved the memory level from low to medium or high. There were also 5% more subjects whose memory was at an average level compared to the results before re-testing. And 23% of the children who had high-level memory.

The Pearson linear correlation test performed between operating memory and phoneme synthesis rates in the second stage of the study indicates that baseline memory in the 60 pediatric population is significantly related to the level of phonemic synthesis measured after participation in preschool classes.

Summarizing the results of the analyses, it can be said that participation in preschool activities favours a significant increase in the level of memory functioning and phonemic synthesis among children in the study group with the weakest competences in this area.

The results of the test showed that boys and girls, five- and six-year-olds, had a similar level of operational memory and the difference was statistically insignificant. Similarly, it was found that the difference between boys and girls, five- and six-year-olds in terms of phonemic synthesis was negligible, and the statistical test revealed that the difference was irrelevant.

