

## Summary

**Title:** The application of the concept of peer learning in shaping the ability to solve word problems by students at a younger school age

**Key words:** mathematics education, peer learning, early school education

This doctoral dissertation is devoted to issues related to peer learning and its application in shaping the ability to solve word problems by students at a younger school age. The dissertation consists of three main parts: theoretical, methodological and empirical.

The first chapter touches upon the issues related to peer learning. The chapter presents the terminology pertaining to peer learning, the characteristics of selected types of such learning, and an outline of its history. The theoretical foundations of peer learning were also laid out. The last part of that chapter discusses the place that peer learning occupies in education, and contains descriptions of selected projects in this area, as well as findings gleaned from research on the subject.

The second chapter brings up the issue of mathematics education at the stage of early school education. It presents selected theories concerning the mathematical development of a child. The assumptions of the core curriculum pertaining to mathematics education at the stage of early school education were also set out. Particular attention was given to the issue of word problems. The chapter also contains a description of selected studies on the ability to solve word problems by students in grades 1-3 of primary school.

The third chapter of this dissertation revolves around the methodological assumptions of my own research. This part discusses consecutively: the subject and objectives of the research, the adopted research problems, formulated hypotheses, variables and their indicators, applied research methods, techniques and tools. Pedagogical experiment, diagnostic survey and observation were used while carrying out the study. The research area and the studied sample were clearly outlined. 57 students participated in the study as part of the experiment. 864 teachers of early school education were subject to the survey.

The next chapter is devoted to the presentation of research process findings. The obtained data were processed for statistics purposes and then presented in the form of tables or graphs, analysed and described.

The analyses conducted in the fourth chapter are complemented later in the paper by a discussion of the results which contains answers to the research questions. The results are also shown against the background of the findings of selected studies by other authors. Moreover, this chapter indicates the problems that arose in the course of the research, which may be subject to further exploration, and the implications for pedagogical practice.

The paper ends with a summary of the whole work. In addition, at the end of the dissertation, there is a list of the applied literature, as well as lists of contents of tables, figures, graphs and appendices.