ABSTRACT

The thesis focuses on the process of solving word problems. The theoretical part defines the typology of word problems, the phases of solving a word problem, and the description of surface solving strategies. The practical part sets goals: 1. to map the difficulties students face when solving word problems and 2. to design, implement, and evaluate activities that could help students reduce these difficulties. The core of the work is action research conducted by a classroom teacher with third-grade students. The research is divided into two phases. The first phase includes tasks: 1. to identify the types of problems that cause difficulties for students, i.e., problems with a low overall success rate of solution, 2. to determine representatives of students with characteristic areas of difficulty. The selected types of problems will be assigned to students in various forms in the second phase of the research with the goal of implementing and subsequently evaluating the interventions mentioned below. The selection of student representatives on whom I focused the intervention activities in the second phase was carried out based on observations of all students solving word problems, analysis of their written solutions, reflections, and short semi-structured interviews. The interventions are designed to three identified representatives of students. These include drawing a solution picture, structuring the assignment of the word problem, including a problem with a distractor and redundant data, and creating their own word problem based on a given mathematical model. The success of the interventions is evaluated on two levels: 1. overall success and 2. success among the observed solvers.

KEYWORDS

Surface strategy; word problem; intervention; understanding the word problem; phases of solving word problems.