ELEMENTARY STUDENTS' AND TEACHERS' REPORTS OF STRATEGIC BEHAVIOR IN MATHEMATICS: HOW CLOSE ARE THEY?

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Research has shown that students and teachers need to act strategically to self-regulate their activity before, during, and after learning and teaching in order to maximize their effectiveness. The present study aimed at investigating the metacognitive and self-regulatory strategies that elementary school students and teachers report using during mathematics learning and teaching respectively. This presentation aimed to investigate the most and the least frequently used strategic behaviors during mathematics as reported separately by students and teachers. There were 344 students of 5th and 6th grade and 292 elementary school teachers participating in the study. Students' strategic behavior during mathematics learning and problem solving was assessed with an 11-item questionnaire. Students were asked to report on a 5-point answer scale how frequently they employ the specific behaviors described in the sentences during mathematics learning and problem solving. Teachers' use of strategies during mathematics instruction was assessed by means of an 18-item questionnaire. Eleven out of the 18 items in the teachers' questionnaire corresponded to the 11 items of the students' questionnaire. Teachers were asked to report on a 5-point answer scale how frequently they employ the specific behaviors described in the sentences during mathematics teaching in order to activate and develop their students' metacognition and self-regulated learning. The two instruments were tested for their structural validity and reliability. Descriptive statistics showed that, in general, elementary school students and teachers report similar strategies as the most and the least frequently used during mathematics. For example, the most frequently employed strategic behavior reported by the students was that, when confronted with a mathematical exercise, they try to spot its key points in order to help them reach the solution. The second most frequently used strategy by the students was that, after solving a mathematical exercise, they consider if the solution produced does make sense, if it is logical. The same results were found regarding teachers. That is, the teachers reported that they ask very frequently their students to spot the key points of a mathematical exercise in order to help them reach a solution and that they ask their students to consider if the solution produced does make sense. The reports of students and teachers also were similar regarding the least frequently employed strategic behaviors. For example, both groups reported that the least frequently employed strategic activity was that of students' self-monitoring during dealing with mathematics learning and problem solving. Students' and teachers' reports presented also some minor differentiations. For example, although teachers reported that they frequently ask from their students to check for the correctness of their answers and solutions produced in mathematics (3rd on teachers' ranking), the students reported that evaluating the solution/answer produced was not so frequently used (7th on students' ranking). The results will be discussed in the frame of self-regulated learning and teaching.

Keywords: Self-regulatory strategies, students' and teachers' metacognition, mathematics learning and teaching.