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The effect of rephrasing word problems on the achievements of Arab students in mathematics.

Paditz, Ludwig (ed.) et al., Proceedings of the 10th international conference “Models in Developing Mathematics Education”, Dresden, Saxony, Germany, September 11–17, 2009. Dresden: Hochschule für Technik und Wirtschaft (ISBN 83-919465-9-2). 383-385 (2009).

Summary: Language is the learning device and the device which forms the student’s knowledge in math, his ability to define concepts, express mathematical ideas and solve mathematical problems. Difficulties in the language are seen more in word problems, clarity and in the way the text is read by the student have a direct effect on the understanding of the problem and therefore, on its solution, could delay the problem solving process. The connection between language and mathematical achievements has a more distinctive significance regarding the Arab student. This is due to the fact that the language which is used in the schools and in textbooks is classical (traditional) Arabic. It is far different than the language used in everyday conversations with family and friends (the spoken Arabic). Our research examine whether rephrasing word problems can affect the achievements of the Arab students in it. The experimental group received mathematics instruction using learning materials of word problems that were rewritten in a “middle language” closer to the students’ everyday language (spoken Arabic), thus keeping the mathematical level of the problems. The research findings showed that students in the experimental group improved their achievements in word and geometric problems significantly more than students from control group.

Classification: D53 C73 C53

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