Improving word problem performance in elementary school students by enriching word problems used in mathematics teaching.

Summary: The traditional practice of using word problems in classroom mathematics has been heavily criticized by educators and researchers. Students have an inclination to apply superficial strategies and exclude several important steps of the modeling process. In this study, a Word Problem Enrichment program (WPE) was developed to encourage teachers to use innovative self-created word problems to improve student mathematical modeling and problem-solving skills. Participants included 170 fourth-, and sixth-graders and ten teachers from elementary schools in southwest Finland. The intervention effectiveness on student problem solving performance was investigated. The results suggested that the enriching word problems used in mathematics teaching is a promising method to improve student problem solving skills when solving non-routine and application word problems.

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