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**Using reciprocal teaching and learning methods to
enhance comprehension in mathematics word
problems.**

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the degree of
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Abstract

This study reports on a classroom design experiment focused on the use of reciprocal teaching methods when solving mathematical word problems. The design experiment was set in a Year 5 classroom where the teacher and students used a newly designed model to assist when solving word problems. The intervention was implemented in a regular classroom environment and used Figure It Out resource books (Ministry of Education, 1999-2008).

The intervention was developed from reciprocal approaches used in a number of previous studies. Reciprocal reading was originally designed and implemented by Palincsar and Brown (1984). The objective of this study was to adapt this model and incorporate it into a mathematics programme for solving word problems. Students worked in groups while using the model and were explicitly taught procedures at each stage. Discussions within groups were an important component of the design experiment. Throughout the study, students discussed thoughts and strategies that could be used to solve the word problems. They reflected on their answers, ensuring they were providing relevant information and then articulated any errors so they could make changes.

Findings indicated that students were able to use the model to assist them when solving mathematical word problems. They followed the process and were able to identify the key aspects of word problems and answer specific questions correctly, providing sufficient detail. Both the teacher and students found the model to be a useful tool when working with the Figure It Out resource books. Through participating in this design experiment students gained confidence when solving word problems.

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