



USE OF LANGUAGE INTERVENTION MATERIALS IN SOLVING WORD PROBLEMS IN GRADE 4 MATHEMATICS

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ABSTRACT

This quasi-experimental study aimed to develop language intervention material for solving word problems in grade four of Banquerohan Elementary School. Specifically, this study sought answers to the following questions: What instructional materials using language strategies may be developed in solving word problems? What is the jurors' evaluation of the developed language intervention materials? and What are the effects of the language intervention materials on the pupils' skills in solving word problems?

The Language Intervention Materials (LIMs) were developed by the researcher as aid to the grade four pupils in solving word problems. The developed materials were focused on the three learning objectives in the third quarter such as: Finds the elapsed time in minutes and seconds (M4ME-IIIIf-11), Solves problems involving elapsed time (M4ME-IIIg-13), and Solves routine and non-routine problems in real-life situations involving perimeter of squares and rectangles, triangles, parallelograms, and trapezoids (M4ME-IIIi-52). There were six (6) language intervention materials were developed, two (2) for each learning objective. Everybody in the experimental group received one set of language intervention materials daily.

These materials have four parts: the first part is the vocabulary development that includes the new words and their meanings, the second part is the different language

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strategies such as using context clues, using the words in the sentence, etc., the third part is the sample word problems with guided steps on solving a word problem, the fourth part is the assessment that includes three (3) word problems.

Based on the findings and conclusions of the jurors of the study, the following were recommended. The developed language intervention materials are equipped with language strategies that can be used in various teaching and learning activities such as individual activity, peer teaching, group activity, online distance learning, and face-to-face classroom setting since they passed the evaluation rating sheet for printed resources adapted from LRMS. Integrating language interventions into mathematics instruction is a promising solution to address the ongoing decline in performance rates, particularly in literacy and numeracy.

The language intervention materials helped the pupil's comprehension of solving word problems. They had a clearer understanding and retention of the subject matter. They learned new words that guided the pupils to solve the word problem easily. The pretest, the output of the pupils shows that they don't know what to do with the problem. The pupils just wrote the numbers that are in the problem as their solution however after the implementation the pupils showed improvements in solving word problems. The pupils showed direction in solving word problems, they had strategies on how to deal with the problem which is visible in their solution that arrived at the correct answer.

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The language intervention materials were developed to enhance language skills by introducing new words in every material. The materials were anchored on the K to 12 Curriculum. The materials were judged on their content quality, format quality, and presentation and organization. The result of the intervention materials showed that the performance level has increased after its implementation. However, the pupils still need more support to attain higher performance levels in solving word problems.

Based on the summary, findings, and conclusions, the following were recommended. The developed language intervention can apply to grade 4 pupils but this can also be used by other grade levels such as Grade 5 and 6 through individual activities, and collaborative or group learning situations. The developed language intervention materials can be enhanced further by contextualizing and adding more language strategies and activities to improve the vocabulary to use both in writing, communicating, and problems-solving skills. To continue using the developed language intervention materials for a longer time to track the long-term efficacy of interventions and their impact on language development. The teacher can use other strategies that apply to the developed language intervention materials that are suited to the learners. Digital platforms, applications, and games may be used to support language development. Their effectiveness may be assessed and compared to traditional methods. Other researchers may further develop the language intervention materials to be useful not only in solving word problems but in other subjects.

Keywords: *language intervention materials, solving word problems, Grade 4 Mathematics*

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