



UNIVERSITI TEKNOLOGI MARA

**UNDERSTAND AND SOLVING MATHEMATICS
PROBLEM USING DRAW A DIAGRAMS**

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ABSTRACT

The action research was being conducted to investigate the effect of the “ Draw a diagram strategy to understand and the solving mathematics problem”. The participant of this action research consisted of twelve students from Year 3M in a Sekolah Kebangsaan St Teresa, Kuching. They were selected from the category, which their performance of mathematic subject low and moderate. The instruments used for collecting data were pre-test and post test. The collected data was being qualitatively and quantitatively analyzed. In order to cross check the collected data, method triangulation were being used on collected data. The result of the research had showed the use of “diagram strategy ” method is able to increase the involvement of students in learning Mathematics. The student’s performance in Mathematics subject was successfully improved at the mean time. Further study could be investigating the effect to understand and solve the solving mathematic problems.

CHAPTER ONE

INTRODUCTION

1.0 Introduction

Problem solving is one of the main focuses in the Malaysian mathematics curriculum. Therefore, I chose the “solving mathematics problems” as the title of my study. Aspects that will be studied in this research are to understand the questions and to solve problems using diagrams strategy. According to George Polya (1957), "students who want to solve mathematical problems can use diagrams strategy and analogies of their own." Besides that, this study also trying to identify common errors made by students. Master problem solving skills is very important because it is the process by which students can use the knowledge, skills and understanding to solve existing mathematics problems. Besides that, the problem solving can help students to develop an understanding of mathematical concepts.

The word "problem" has a specific meaning in mathematics. The problem refers to reality or everyday life situations that require solutions where the solutions are not real or intangible. Students had to use existing knowledge to get the answers. In conclusion, there is not an easy way to solve the mathematic problem. Finding a solution to the difficult problem mean to solve and to overcome obstacles in solving the problem. Unable to understand the questions in solving mathematics problem happen not only to students who are good at and also students who are weak.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

There are methods and strategies that can be used to help students to understand the problem-solving questions. This chapter is to discuss what is problem solving, important of problem solving the mathematical operations and the common errors. This chapter is to discuss what is problem solving, important of problem solving the mathematical operations and the common errors. in this chapter also discuss how to the using drawing a diagram strategy in solve mathematics problem.

2.1 Problem Solving

There are many strategies that can be used to help students understand math problems for example, methods of analysis, analogies and diagrams. The role of the teacher should choose appropriate strategies that can help students understand math problems. Teachers can use a variety of questioning techniques that develop students' thinking. The role of students must be involved actively in the learning process in the classroom.

Teachers need to give the problematic question of mathematical methods in the cognitive development of students (high, medium and low). Besides that, the questions also from concrete to the abstract or Easy to difficult. So the