UNIVERSITI TEKNOLOGI MARA

USING MULTIPLIER'S PLACE VALUE PARTITIONING STRATEGY TO SOLVE STUDENT'S ERRORS IN MULTIPLICATION

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ABSTRACT

This research discusses about the effectiveness of a strategy called the Multiplier's Place Value Partitioning Strategy to solve student's common errors in multiplication. My students were having problems in multiplication especially when it involved of 2 digits of multiplier. The research aimed to study how Multiplier's Place Value Partitioning Strategy could help students to improve and reduce their errors in multiplication. The research was conducted in SK Bandar Samariang Kuching involving 16 primary 5 students. I utilized two techniques for the data collection: 1) Pretest, 2) Posttest. I introduced the Multiplier's Place Value Partitioning Strategy after the Pretest. Findings showed that Multiplier's Place Value Partitioning Strategy was effective in solving student's errors in multiplication, for example student 10 with his marks improves in between 36% to 79%. I am very confidence that this strategy is able to transform student's achievement in multiplication. Therefore, it could become one of the best methods to improve, to help, to remediate and to overcome their poor performance in Mathematics generally. In future research, teachers can use this strategy instead of trying traditional method in multiplication. This will make learning of mathematics more fun, enjoyable and at the same time minimize student's error in calculating and maximize their skills in solving mathematics problems.

CHAPTER ONE

INTRODUCTION

1.0 Introduction

As mathematics teachers, it is our responsibility to develop our students to excel and to have a quick recall of mathematics operations: addition, subtraction, multiplication, and division. These are the basic mathematical concept s to be taught since primary education level. In primary school level, the students need to learn the basic mathematics operations in order to provide a foundation for mathematics success when they are to step into secondary level. We expect that all students will be able to master these basic skills, but it is not a simple goal to achieve. Hence, it is our responsibility to promote student's effort in remembering the skills. Teachers need to have suitable strategies or techniques in order to help their students to succeed in their study.

Mathematics is one of the most important subjects in Malaysia schools. It is because almost everything that we do daily and anything around us is related to mathematics. Students, teachers, and some professions may use it as a medium to solve whatever problems they have. Mathematics relate closely to numerical system which is containing of four basic operations; addition, subtraction, multiplication and division. During random observation of 5C's students in SK Bandar Samariang, Kuching, the researcher noticed that most of them are facing difficulties in multiplying numbers. Therefore, the first step is to identify their errors in multiplying process (for the whole numbers; positive integers only, 0,1,2.....) and then used Multiplier's Place Value Partitioning Strategy to improve their weaknesses as compared to using Traditional or Long Form Multiplication Strategy. When implement this strategy, the researcher began to think that this way may give the students more understanding in getting

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

There were a number of researchers have studied how primary school students multiply the numbers through various ways and strategy in the teaching and learning process. In this chapter, we are going to review others point of views about the study: the four basic operations in mathematics, student's errors in multiplying the numbers and introducing the new strategy of the Multiplier's Place Value Partitioning Strategy, to solve student's common errors in multiplication.

2.1 Four Basic Operations in Mathematics

There are four common operations on numbers: addition, subtraction, multiplication and division. Addition is the process of calculating the total of two or more numbers while subtraction is the process of taking one number away from another. Multiplication is the process of calculating the result of repeated additions of two numbers while division is the action of separating something into parts. Out of four operations, majority of my students said multiplication and division was the most difficult operations to master. There were quite a number of strategies and theories that supported multiplication and division operations.

According to Nunes and Bryant (1996), they general point of view about multiplication is that *"they simply are inverse arithmetical operations and these concepts need to be taught after the students knowing addition and subtraction"* (page 44). Therefore, when we teach our students how to multiply numbers, we need to ensure that they have mastered the concept of addition and subtraction. In another word, they need to have less or no problems in