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**DIFFICULTIES IN THE FUNDAMENTAL PROCESSES OF BASIC
FACTS IN MATHEMATICS AMONG GRADE SIX PUPILS IN
ODIONGAN NORTH DISTRICT, DIVISION OF BOMBOLON
SCHOOL YEAR 1983-84**

**A Thesis Abstract
Presented to
the Faculty of the Graduate School
Aklan College
Kalibo, Aklan**

**In Partial Fulfillment
of the Requirements for the Degree
Master of Arts in Education**

**by
LILIA P. FOS
March 1984**

ABSTRACT

This study was conducted to determine and identify the difficulties in the fundamental processes of the basic facts in mathematics among grade six pupils in Odiangan North District, Division of Romblon, School Year 1983-84. This area has been chosen because results of "Survey of Outcomes of Elementary Education" as SOUTHLE, revealed that pupils graduating from the elementary are deficient in some learning task which could be traced back to their inability to master the fundamental operations of the basic facts of addition, subtraction, multiplication and division. Since the necessity for developing the students' ability to compute, reason and communicate with numbers is recognized as an important function of the mathematics curriculum, knowing the pupils' difficulties, therefore, will help acquire and strengthen the skills needed for effective learning in order to satisfy the demands of society and to make the pupils fully aware of the important role that arithmetic plays in their daily undertakings.

The results of this study could serve as a guide to mathematics teachers and to supervisors as well in giving suitable provisions in upgrading pupils skills.

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and competencies. The suggested measures could likewise, be used by these supervisors and mathematics teachers in improving the quality of mathematics education.

It is for these reasons, that the researcher was motivated to conduct the study in order to answer the questions: What number combinations are the sources of errors in the addition, subtraction, multiplication and division of operations? How do the pupils perceive the basic facts as to their level of difficulty when grouped by sex and by school? How many pupils have mastered the basic facts in the four fundamental operations when grouped by school and by sex? How many basic facts in the four fundamental operations are mastered by the pupils when grouped by school and by sex?

Considering into account the questions to be resolved, descriptive method of research was used. The normative survey was employed using the diagnostic test as the instrument for gathering data. The 110 grade six pupils, 155 boys and 155 girls, which represents 82 per cent of the total population enrolled in 10 complete elementary schools of Odiongan North District, 1983-84, were used as the respondents of this study and were actually tested.

Descriptive statistics like frequencies, percentages, averages, ranks and standard deviations were used in the different tables in the analysis of the

data. The null hypothesis tested using the t-test and the Kendall Coefficient of Concordance (W). The t-test was used to find the significance of the difference between the perception of the respondents when grouped by sex while the Kendall (W) was used to find the relationship when the respondents were grouped by school. The probability level was set at 0.05.

Results in the number combination which are the sources of errors in the four fundamental operations showed that in addition of basic facts, the highest percentage of error 14.52, occurred in the $8 + 7 = 15$ combination. In the subtraction of basic facts, the highest percentage of error, 11.96 was seen in $17 - 9 = 8$ combination. The basic fact in multiplication which obtained the highest percentage of error, 18.19 percent, is the $7 \times 8 = 56$ combination. In the division operation of basic facts, the greatest percentage of error of 49.60 percent was committed on the combination, $42 \div 6 = 7$.

The principal findings on the level of difficulty of the basic facts in the four fundamental operation as perceived by the grade six pupils when grouped by sex revealed that there is no difference between the perception of both boys and girls regarding the level of difficulty of the basic facts. When grouped according to sex, both sexes considered the basic facts in addition, subtraction and multiplication as not difficult, while

majority of both boys and girls perceived the division facts as somewhat difficult. However, when the respondents were grouped by school, the result on the level of difficulty of the basic facts is the four fundamental processes showed that the pupils' general perception of the basic facts in addition is not difficult. On the other hand, the basic facts of subtraction, multiplication and division were considered by the respondents as somewhat difficult. The computation using the Kendall Coefficient of Concordance (W) test showed that there is no relationship between the perception of the level of difficulty and the grouping of pupils by school.

The findings as to the number of pupils who mastered the basic facts in the four fundamental operations pointed out that out of 310 respondents, 69 mastered the addition facts, 31 pupils mastered the subtraction facts, 30 mastered the multiplication facts and only 16 respondents showed mastery in the division facts.

Results on the number of basic facts mastered by the respondents when grouped by school and by sex revealed that the average number of addition facts mastered by the respondents is 37.2, while the number of subtraction facts correctly answered by the respondents is 15.2. In multiplication, the average number of basic facts that were mastered is 18.05. Only 3.65 basic facts in division were answered correctly by the

respondents.

Based on the findings revealed in this study, the research humbly recommends that pupils who have made a number of mistakes in the addition, subtraction, multiplication and division facts should practice giving the sum, difference, product and quotient of the basic facts orally within 3 minutes, paying special attention to the facts that gives frequent trouble. If accuracy and speed is not attained, constant practice should be done on them until such speed is achieved without errors. It is also recommended that teachers should introduced techniques for fixing skills. These techniques may include a variety of drill exercises such as cards, combination bingo, race track or rhythmic response. Likewise, the principle methods of organizing the facts for learning should be applied. It is also hoped that teachers should stimulate the learner to sense, to discover, and to interpret the concepts underlying the interrelated ideas of the related number facts and skills, and that they should also provide remedial teachings to slow learners. Lastly, the researcher humbly suggests that diagnosis of the difficulties, weaknesses and deficiencies of pupils should be done periodically to find out the inadequacies and deficiencies of pupils in specific skills so that by this means timely and immediate remediation can be afforded for them.

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APPROVAL SHEET

This Thesis entitled DIFFICULTIES IN THE FUNDAMENTAL PROCESSES OF BASIC FACTS IN MATHEMATICS AMONG GRADE SIX PUPILS IN ODIONGAN NORTH DISTRICT, DIVISION OF BOWELON SCHOOL YEAR 1983-1984, prepared and submitted by Mrs. LILIA FETALVER FOS in partial fulfillment of the requirements for the degree of MASTER OF ARTS IN EDUCATION Major in Administration and Supervision has been examined and is recommended for acceptance and approval for ORAL EXAMINATION.

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