



TEACHING ESSENTIAL MATHEMATICAL SKILLS: BASIS FOR ACTION PLAN TO ADDRESS PROBLEMS ENCOUNTERED IN THE NEW NORMAL

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ABSTRACT

The study aimed to look into the teaching of essential mathematical skills in the new normal to Grade 4 pupils in public elementary schools in Cavinti District, Division of Laguna and to form the basis for a plan to address the problems encountered by Grade 4 mathematics teachers.

Specifically, it sought answers to the following questions: 1. the level of the problems encountered in the new normal in terms of Provision of Instruction, Samples and Applications, Exercises for Practice, Learning Assessment and Feedback; 2. the level of teaching Essential Mathematics Skills in terms of Multiplication of Whole Numbers, Division of Whole Numbers, Addition of Fractions, Subtraction of Fractions, and Basic Concepts of Decimals; 3. Is there a significant relationship between the problems encountered in the new normal and teaching essential mathematical skills; 4. What plan of action may be proposed to address the problems encountered by Grade 4 mathematics teachers in teaching essential mathematical skills in the new normal?

The level of problems encountered in the new normal in terms of provision of instruction, samples and applications, exercise for practice, learning assessment and feedback as rated by Grade 4 mathematics teachers were high. On the other hand, the level of teaching essential mathematics skills in terms of multiplication and division of whole numbers, addition and subtraction of fractions and basic concepts of decimals were moderate as rated by Grade 4 math teachers.

There is no significant relationship on the level of problems encountered by the teachers and the teaching of essential mathematics skills as rated by Grade 4 math teachers except for the exercises for practice in terms of division of whole numbers which showed significant relationship. This called for the partial acceptance of hypothesis which incited that there was no significant relationship between the two.

It is highly recommended that the Grade 4 math teachers may consider the possible implementation of the plan of action that the researcher hereby proposed to address the problems encountered by Grade 4 math teachers in teaching essential mathematical skills in the new normal.

KEYWORDS: *Addition of Fractions, Basic Concepts of Decimals, Division of Whole Numbers, Essential Mathematical Skills, Exercises for Practice, Feedback, Instruction, Learning Assessment, Multiplication of Whole Numbers, New Normal, Samples and Applications, Subtraction of Fractions*

I. INTRODUCTION

In order to successfully meet the challenges of teaching and learning in the new normal, the Department of Education has not allowed public school teachers to be left on their own devices and exhaust their own resources in complying with Secretary Briones' directive with the approval of President Duterte, that delivery of education should continue even in the time of pandemic. It is a right decision made for there is no certainty when the pandemic will end and if education stops many Filipino learners will be unproductively bored at their homes.

To show the full support of the Department of Education to public school teachers, it issued the Department Order (DO) Number 12 Series of 2020 on the 19th day of June of 2020. The said order clearly specifies the major strategy that will be used in all public schools across the country for the delivery of education in the time of pandemic and that all public school teachers should comply and implement. The said order states that for teaching and learning in the normal, the approach all public school teachers will adopt are distance learning modalities appropriate to the context of local conditions and consistent with the COVID-19 guidelines and regulations. One of these modalities is the modular approach in teaching.



More particularly, the implementation of modular approach to teaching and learning in the new normal is contained in the Basic Education Learning Continuity Plan (BE-LCP) of D.O. No. 12, Series of 2020. The said plan had outlined in detail how education will be delivered in the new normal. It contains strategies for instruction, production and distribution of modules, and strategies for the delivery of the contents of the curriculum.

Acknowledging the limitations of teaching and learning in the new normal, one other strategy that is contained in the Basic Education Learning Continuity Plan (BE-LCP) is the teaching of essential concepts and skills in all learning areas. This is another measure taken by the Department of Education to lessen the burdens of parents and pupils in having to continue learning without the physical presence of teachers. The Department of Education asserts that if pupils will find it difficult to learn because of the pandemic, they should at least acquire understanding of basic concepts and acceptable level of competency in skills that are considered as essential by the Department of Education because pupils will need them in the next grade level.

Grade 4 Mathematics teachers are among the public school teachers who have implemented the modular approach to teaching and learning. They underwent extensive training for the implementation of modular approach to teaching. Like all other public elementary school teachers, Mathematics teachers complied in teaching only the essential mathematical concepts and skills. But, no matter how much effort they put in teaching in the new normal, problems inevitably arise.

This study will look into these problems that Grade 4 Mathematics teachers encountered in teaching the essential Mathematical skills to their Grade 4 pupils from public elementary schools in the District of Cavinti, Division of Laguna.

Metante and Sorreda (2016) noted that Mathematics was the weakness of majority of Filipino learners, and it was the same with learners from other countries. Consequently, revisions of the basic education curriculum stressed the importance of the teaching of basic mathematical concepts and essential mathematical skills. Educators believed that learners could always go on to learn higher mathematics course if the structure of their foundation in Mathematics was strong enough and well-established.

From the many years of teaching at elementary level in public schools, Shaw and Mishkin (2019) stressed that among the basic operations on whole numbers that many students encountered the greatest difficulty either in performing or in having mastery was division of numbers.

According to Ullman and Thompson (2017), in teaching basic and essential mathematical skills to young learners the mathematics teachers should make use of teaching strategies that were known to effectively help in provision of instruction to young learners who were probably learning mathematical skills for the first time.

Torgersen (2016) made a critical review of several Mathematics modules that were used for teaching of basic concepts in Mathematics and for the teaching of essential skills in Mathematics. Results of the critical review formed the basis for the revision of Mathematics modules to make them richer in contents and more effective for delivery of Mathematics lessons. Researcher found that there were terms used in the samples and applications that were vague and oftentimes confusing for the students, and so the researcher recommended that simpler terms be used instead and the problem being asked should be stated direct to the point.

Kierman (2017) highlighted the importance of provision of exercises for practice of learners when teaching essential mathematical skills. For the author, excellent delivery of lessons and teaching by the teacher would never suffice for learners to acquire acceptable level of competency in performing and applying essential mathematical skills. Learners could best learn an essential skill if they practice the skill on their own.

For Nillson and Trevarthen (2019), the teaching and learning process culminated, temporarily, in assessment of learning. The authors described learning as temporarily ending the teaching and learning process for further teaching may be necessary depending on the results of assessment which should be communicated to learners in the form of feedback. The teaching and learning process was not complete without learning assessment. It was the results of assessment of learning that would tell both teacher and her learners whether or not the prescribed learning objectives had been attained. The authors also said that there were assessment modes that did not simply apply for assessment of learning of learners who were under a certain program that was delivered thru a flexible learning system. Though most assessments in alternative learning system were limited to paper and pencil type of test and online assessment, a creative teacher could construct a test that would not allow students to simply memorize what was contained in modules, but would make the students to transfer their understanding and skill to a different context.

As constructivist, Traupmann (2017) encouraged Mathematics teachers who were assigned to teach in programs under a flexible learning system to observe and maintain alignment among the learning objectives as specified in each Mathematics module, the teaching-learning activities (TLA), and learning assessment. The author was confident that such alignment would ensure the success of the teaching of essential mathematical skills to students. Mathematics teachers should clearly specify the learning objective for a Mathematics and what skills students should be able to demonstrate during the assessment of learning.

Kelly (2019) said that the usefulness of provision of feedback at the end of the learning process should not be underestimated. Truly dedicated teachers always provided feedback to students not only in the form of numerical indications of learnings such as marks but also in the form of discussion with the learner for the teacher to point the learner's weaknesses that need to be improved and the learner's strengths. The author said that provision of feedback became even more important and a necessity after evaluation of the performance of learners, evaluation of the project submitted by students, or after evaluation of outcomes of learning of students. In Mathematics, for instance, the author said that provision of feedback should be made after the teacher had checked the solutions of students to the given problem. The author recommended that rubrics be used for assessment of mathematical skills in problem solving. They did not only inform the learners of their scores but, more importantly, they gave feedback to learners about the quality of their work that justified the score that was awarded to them.



Dayagbil et al. (2021) explored the challenges and issues in teaching and learning continuity of public higher education in the Philippines as a result of the Covid-19 pandemic. Their study found out that during school lockdowns, the teacher made adjustments in teaching and learning designs guided by the policies implemented by the institution. Most of the students had difficulty complying with the learning activities and requirements due to limited or no internet connectivity. They concluded that higher educational institutions have to migrate to flexible teaching and learning modality, recalibrate the curriculum, capacitate the faculty, upgrade the infrastructure, implement a strategic plan and assess all aspects of plan.

II. OBJECTIVES

It is the aim of the study to look into the teaching of essential mathematical skills to form the basis for a plan of action to address the problems encountered in the new normal. Specifically, the following were the research questions of the study:

1. What is the level of teaching essential mathematics skills in terms of:
 - 1.1 Multiplication of Whole Numbers;
 - 1.2 Division of Whole Numbers;
 - 1.3 Addition of Fractions;
 - 1.4 Subtraction of Fractions; and
 - 1.5 Basic Concepts of Decimals?
2. What is the level of the problems encountered in the new normal in terms of:
 - 2.1 Instruction;
 - 2.2 Samples and Applications;
 - 2.3 Exercises for Practice;
 - 2.4 Learning Assessment; and
 - 2.5 Feedback?
3. Is there a significant relationship between the problems encountered in the new normal and the teaching essential mathematical skills?
4. What plan of action may be proposed to address the problems encountered by Grade 4 Mathematics teachers in teaching essential mathematical skills in the new normal?

III. METHODOLOGY

Weiskrantz and Marshall (2016) highly recommend the descriptive research design for quantitative study that aim to describe the present status of a system, to describe the level of effectiveness of an intervention that was implemented, or to assess the level of performance of individuals, operations, or a newly acquired machine.

Since the researcher is interested in describing the problems encountered by Grade 4 Mathematics teachers in teaching essential mathematical skills to Grade 4 pupils in the new normal which is a new system of delivery of education due to the pandemic brought by COVID-19, the researcher employed the descriptive methods to obtain a sufficient and reliable information about the experiences of Grade 4 Mathematics teachers as well as to obtain an accurate level of competency of Grade 4 pupils in essential mathematical skills.

Respondents of the study came from the District of Cavinti, Division of Laguna. In particular, they were selected from 17 public elementary schools in Cavinti District. The sample of respondents for the study consisted of twenty (20) public school teachers. The study had certain data needed because of the focus of investigation of the researcher. Thus, respondents of the study were mathematics teachers from public elementary schools in Cavinti District.

The researcher used the purposive sampling technique for the selection of respondents of the study. According to Weiskrantz and Marshall (2016), the use of purposive sampling technique ensures that only those individuals who are qualified to provide the researcher with reliable data will be considered to participate in the study as respondents of the study.

This study employed the following statistical tool for the treatment of the data gathered.

The weighted mean was used to combine all the ratings of respondents for an indicator, and obtain a single numerical description of the perception of all respondents. The weighted mean was computed by multiplying the number of respondents by a given rating, and adding all the products. The sum was then divided by the sample size.

Standard Deviation was the statistical tool used by the researcher to measure the dispersion of a dataset relative to its mean and calculated as a square root of the variance.

The relationship between the problems encountered by Grade 4 Mathematics teachers in teaching essential mathematical skills and the level of teaching of essential mathematical skills were determined using Pearson r Product Moment Correlation Coefficient.

The test for significance of computed value of Pearson r correlation coefficient were undertaken using 5%, or 0.05, level of significance.

IV. RESULTS AND DISCUSSION

This chapter consists of presentation, analysis and interpretation of data gathered from twenty (20) Grade 4 Mathematics teachers from Cavinti District, Division of Laguna.

**Level of Teaching Essential Mathematics Skills**

In this study, an action plan was developed by the researcher to address the problems encountered by the teachers in teaching essential mathematics skills in the new normal. The level of teaching essential Mathematics skills refers to the multiplication of whole numbers, division of whole numbers, addition of fractions, subtraction of fractions and basic concepts of decimals.

Table 1. Level of Teaching Essential Mathematics Skills in terms of Multiplication of Whole Numbers

STATEMENT	Mean	SD	Remarks
<i>The pupils...</i>			
<i>...perform multiplication of two whole numbers between one and 100,000 with acceptable accuracy.</i>	3.10	0.85	Moderately Agree
<i>...do all exercises for multiplication of whole numbers within the given time limit.</i>	3.00	0.79	Moderately Agree
<i>...readily identify the whole numbers in a problem, or application, whose product is to be obtained.</i>	3.10	0.72	Moderately Agree
<i>...interpret the product of whole numbers in problem-solving</i>	3.15	0.75	Moderately Agree
<i>...express product of whole numbers with appropriate unit, or monetary sign.</i>	3.05	0.83	Moderately Agree
<i>Overall Mean = 3.08</i>			
<i>Standard Deviation = 0.77</i>			
<i>Verbal Interpretation = Slightly Competent</i>			

The results showed that in terms of multiplication of whole numbers, it attained an overall mean score of 3.08 and a standard deviation of 0.77 and was regarded as Moderate among the respondents. This meant that the Grade 4 pupils were slightly competent in this skill.

It was presented in the table that Grade 4 pupils attained a certain level of competency in obtaining the product of two (2) whole numbers, but this level of competency needed to be improved because it was below the acceptable level of competency that was adequate to say that pupils had attained mastery of multiplication of whole numbers.

Table 2 shows the level of teaching essential mathematics skills in terms of division of whole numbers.

Table 2. Level of Teaching Essential Mathematics Skills in terms of Division of Whole Numbers

STATEMENT	Mean	SD	Remarks
<i>The pupils...</i>			
<i>...get the quotient of two whole numbers between one and 100,000 with acceptable accuracy.</i>	3.15	0.67	Moderately Agree
<i>...do all exercises on division of whole numbers within the given time limit.</i>	3.10	0.64	Moderately Agree
<i>...identify the dividend and the divisor in a problem.</i>	3.20	0.77	Moderately Agree
<i>...explain the meaning of the quotient obtained by division of whole numbers.</i>	3.30	0.80	Moderately Agree
<i>...express the quotient with appropriate units, or monetary sign.</i>	3.25	0.72	Moderately Agree
<i>Overall Mean = 3.20</i>			
<i>Standard Deviation = 0.71</i>			
<i>Verbal Interpretation = Slightly Competent</i>			

The results showed that the level of teaching essential Mathematics skills in terms of Division of Whole Numbers attained a mean score of 3.20 and a standard deviation of 0.71 and was Moderate among the respondents. This means that the Grade 4 pupils were slightly competent in this skill.

Table 3. Level of Teaching Essential Mathematics Skills in terms of Addition of Fractions

STATEMENT	Mean	SD	Remarks
<i>The pupils...</i>			
<i>...find the sum of two proper fractions with acceptable accuracy and speed.</i>	3.20	1.01	Moderately Agree
<i>...obtain the sum of two improper fractions with minimum error or none at all.</i>	3.35	0.75	Moderately Agree
<i>...add two mixed fractions with ease and confidence.</i>	3.05	0.60	Moderately Agree
<i>...find the sum of any two combination of the three types of fractions.</i>	3.15	0.75	Moderately Agree
<i>...tell if addition of fractions is the operation involved in the problem.</i>	3.10	0.72	Moderately Agree

*Overall Mean = 3.17**Standard Deviation = 0.77**Verbal Interpretation = Slightly Competent*

The results showed that the level of teaching essential mathematics skills in terms of Addition of Fractions attained a mean score of 3.17 and a standard deviation of 0.77 and was Moderate among the Grade 4 Mathematics teachers as respondents. This meant that the Grade 4 pupils were slightly competent in this skill.

Table 4. Level of Teaching Essential Mathematics Skills in terms of Subtraction of Fractions

STATEMENT	Mean	SD	Remarks
<i>The pupils...</i>			
<i>...identify the subtrahend and the minuend.</i>	2.90	1.12	Moderately Agree
<i>...explain the meaning of the difference between two fractions.</i>	3.20	0.70	Moderately Agree
<i>...get the difference between two proper fractions with acceptable accuracy.</i>	3.30	0.86	Moderately Agree
<i>...find the difference between two improper fractions with ease and confidence.</i>	3.20	0.70	Moderately Agree
<i>...obtain the difference, in lowest terms, between any two types of fractions.</i>	3.25	0.72	Moderately Agree

*Overall Mean = 3.17**Standard Deviation = 0.83**Verbal Interpretation = Slightly Competent*

The result showed that the level of teaching essential mathematics skills in terms of Subtraction of Fractions attained a mean score of 3.17 and a standard deviation of 0.83 and was Moderate among the respondents. This meant that the Grade 4 pupils were slightly competent in this skill.

Table 5. Level of Teaching Essential Mathematics Skills in terms of Basic Concepts of Decimals

STATEMENT	Mean	SD	Remarks
<i>The pupils...</i>			
<i>...round off correctly decimal numbers to required number of decimal places.</i>	3.25	0.79	Moderately Agree
<i>...explain with sufficient clarity the significance and placement of a digit in a decimal number.</i>	3.20	0.83	Moderately Agree
<i>...apply the rule for rounding off numbers to rounding off decimal numbers correct to given number of significant digits.</i>	3.10	0.85	Moderately Agree
<i>...tell the value of decimal number in a given monetary amount, and state what of one whole it represents.</i>	3.25	0.85	Moderately Agree
<i>...readily convert fractions to decimal numbers to required number of decimal places, and vice versa.</i>	3.05	0.94	Moderately Agree

*Overall Mean = 3.17**Standard Deviation = 0.84**Verbal Interpretation = Slightly Competent*

The results showed that the level of teaching essential mathematics skills in terms of Basic Concepts of Decimals attained a mean score of 3.17 and a standard deviation of 0.84 and was Moderate among the respondents. This meant that the Grade 4 pupils were slightly competent in this skill.

Level of Problems Encountered in the New Normal

In this study, the level of problems encountered in the new normal referred to the provision of instruction, samples and applications, exercise for practice, learning assessment and feedback.

**Table 6. Level of Problems Encountered in the New Normal in terms of Instruction**

STATEMENT	MEAN	SD	REMARKS
<i>The teacher...</i>			
<i>...makes interaction between pupils in the new normal.</i>	3.70	0.92	Agree
<i>...gives opportunities for pupils to ask questions and clarifications about the lessons.</i>	3.80	1.06	Agree
<i>...provides pupils with more in-depth explanation of lessons.</i>	3.75	0.79	Agree
<i>...does further instruction possible through distance.</i>	4.00	0.73	Agree
<i>...addresses concerns of pupils about their lessons.</i>	4.05	0.69	Agree
Overall Mean = 3.86			
Standard Deviation = 0.84			
Verbal Interpretation = Most of the Time			

The result showed that the level of problems encountered in the new normal in terms of Instruction attained a mean score of 3.86 and a standard deviation of 0.84 and was High among the respondents. This meant that most of the time the teachers encountered problems in the provision of instruction.

Table 7 shows the level of problems encountered in the new normal in terms of samples and applications.

The results showed that the level of problems encountered in the new normal in terms of Samples and Applications attained a mean score of 3.95 and a standard deviation of 0.67 and was High among the respondents. This means that most of the time the teachers encountered problems in terms of provision of samples and applications in their teaching.

Table 7. Level of Problems Encountered in the New Normal in terms of Samples and Applications

STATEMENT	Mean	SD	Remarks
<i>The teacher...</i>			
<i>...presents samples and applications in modules in great details.</i>	3.90	0.72	Agree
<i>...makes applications of essential mathematical skills relevant in pupils' real life.</i>	3.80	0.62	Agree
<i>...clarifies most of the procedures with samples and applications.</i>	3.95	0.60	Agree
<i>...explains some samples and applications given in modules to be understood by the pupils.</i>	4.05	0.76	Agree
<i>...provides more samples and applications to supplement the resources.</i>	4.05	0.69	Agree
Overall Mean = 3.95			
Standard Deviation = 0.67			
Verbal Interpretation = Most of the Time			

Table 8. Level of Problems Encountered in the New Normal in terms of Exercise for Practice

STATEMENT	Mean	SD	Remarks
<i>The teacher...</i>			
<i>...gives supplementary exercises for mastery of essential mathematical skills.</i>	3.95	1.10	Agree
<i>...provides exercises ideal for the varying abilities of pupils.</i>	3.95	0.83	Agree
<i>...allows pupils to practice for mastery of essential mathematical skills are limited to exercises in modules only.</i>	3.70	1.08	Agree
<i>...assigns supplementary exercises to pupils with enough time.</i>	4.05	0.69	Agree
<i>...provides exercises with the same pattern from the samples given that can be done independently.</i>	4.05	0.76	Agree
Overall Mean = 3.94			
Standard Deviation = 0.90			
Verbal Interpretation = Most of the Time			

The results showed that the level of problems encountered in the new normal in terms of Exercises for Practice attained a mean score of 3.94 and a standard deviation of 0.90 and was High among the respondents. This means that the teachers encountered problems in terms of giving exercise for practice most of the time.



Table 9. Level of Problems Encountered in the New Normal in terms of Learning Assessment

STATEMENT	Mean	SD	Remarks
<i>The teacher...</i>			
<i>...assesses learning through paper and pencil which is authentic to pupils' competency.</i>	4.10	0.64	Agree
<i>...assesses the pupils to determine the quality of pupils' learning.</i>	3.90	0.97	Agree
<i>...measures the pupils' actual level of competency in essential mathematical skills.</i>	3.90	0.97	Agree
<i>...applies reliability and validity of learning assessments.</i>	3.90	0.91	Agree
<i>...gives assessment consistent to the given modules.</i>	4.00	1.08	Agree
Overall Mean = 3.96			
Standard Deviation = 0.91			
Verbal Interpretation = Most of the Time			

The result showed that the level of problems encountered in the new normal in terms of Learning Assessment attained a mean score of 3.96 and a standard deviation of 0.91 and was High among the respondents which meant that teachers encountered problems in giving assessment most of the time.

Level of Problems Encountered in the New Normal in terms of Feedback

The result showed that the level of problems encountered in the new normal in terms of Feedback attained a mean score of 3.81 and a standard deviation of 0.79 and was High among the respondents. This meant that the Grade 4 Mathematics teachers encountered problems in giving feedback to learners most of the time.

Table 10. Level of Problems Encountered in the New Normal in terms of Feedback

STATEMENT	Mean	SD	Remarks
<i>The teacher...</i>			
<i>...checks and corrects the results of the given module.</i>	4.25	0.97	Strongly Agree
<i>...provides immediate feedback to pupils.</i>	3.90	0.55	Agree
<i>...provides feedback to pupils in narrative form to explain their mistakes and weaknesses for correction and intervention.</i>	3.55	0.83	Agree
<i>...reviews of past lessons after feedback about their performance in assessment which is given to pupils for the improvement of their performance.</i>	3.60	0.75	Agree
<i>...takes time to respond to feedback regardless of the delay.</i>	3.75	0.64	Agree
Overall Mean = 3.81			
Standard Deviation = 0.79			
Verbal Interpretation = Most of the Time			

Table 11. Significant Relationship between Problems Encountered in the New Normal and Teaching Essential Mathematical Skills

Problems	Teaching	Computed r-value	Strength	p-value	Analysis
Instruction	Multiplication	0.028	Very Weak	0.905	Not Significant
	Division	0.149	Very Weak	0.531	Not Significant
	Addition	0.133	Very Weak	0.576	Not Significant
	Subtraction	0.031	Very Weak	0.898	Not Significant
	Decimals	0.019	Very Weak	0.935	Not Significant
Samples and Applications	Multiplication	0.066	Very Weak	0.782	Not Significant
	Division	0.155	Very Weak	0.513	Not Significant
	Addition	0.146	Very Weak	0.540	Not Significant
	Subtraction	0.073	Very Weak	0.760	Not Significant
	Decimals	0.064	Very Weak	0.788	Not Significant
Exercises for Practice	Multiplication	0.337	Weak	0.147	Not Significant
	Division	0.466	Moderate	0.038	Significant
	Addition	0.366	Weak	0.113	Not Significant
	Subtraction	0.184	Very Weak	0.438	Not Significant
	Decimals	0.246	Weak	0.297	Not Significant
Learning Assessment	Multiplication	0.021	Very Weak	0.931	Not Significant
	Division	0.100	Very Weak	0.675	Not Significant



	Addition	0.049	Very Weak	0.838	Not Significant
	Subtraction	0.219	Weak	0.354	Not Significant
	Decimals	0.109	Very Weak	0.647	Not Significant
	Multiplication	0.075	Very Weak	0.752	Not Significant
	Division	0.225	Weak	0.340	Not Significant
Feedback	Addition	0.059	Very Weak	0.806	Not Significant
	Subtraction	0.190	Very Weak	0.423	Not Significant
	Decimals	0.010	Very Weak	0.967	Not Significant

Legend:

Range	Verbal Interpretation
0.80-1.00	Very Strong
0.60-0.79	Strong
0.40-0.59	Moderate
0.20-0.39	Weak
0.00-0.19	Very Weak

Using 5% level of significance, results of statistical test used to determine if the obtained value of Pearson r correlation coefficient indicated significant relationship between the problems encountered by Grade 4 mathematics teachers in teaching essential mathematical skills and the level of teaching in selected essential mathematical skills, were summarized and presented in *Table 11*.

V. CONCLUSION

Based on the findings of the study which were summarized and presented above, it could be inferred that there was no significant relationship on the level of problems encountered by the teachers and the teaching of essential mathematical skills as rated by Grade 4 math teachers except for the exercises for practice in terms of division of whole numbers which showed significant relationship. This called for the partially acceptance of hypothesis which incited that there was no significant relationship between the two.

Recommendations

The following were the researcher's recommendations to address the problems encountered by Grade 4 teachers in teaching essential mathematical skills in the new normal and to improve the level of teaching essential mathematical skills.

For school heads in every public elementary school, Grade 4 teachers may be advised to meet together to discuss the problems they encountered during their teaching of essential mathematical skills in the new normal in order for them to devise strategies to prevent the problems from getting serious. Grade 4 teachers should also look into how the problems would be different in the event that limited facet-to-face classes were allowed to be conducted in their school.

In case that modular distance learning would continue to be used as either as alternative learning modality or in combination with other learning modalities, contents of the mathematics modules on essential mathematical skills should be improved particularly on samples and application of skills as well as on activities and exercises provided in modules for practice of Grade pupils in applying the essential mathematical skills.

Grade 4 teachers and Mathematics coordinators may consider for possible implementation the action plan that the researcher hereby proposed to address the problems encountered by Grade 4 teachers in teaching essential Mathematical skills.

Grade 4 teachers may adopt new and innovative approaches to teaching essential mathematical skills to Grade 4 pupils particularly in teaching multiplication and division of whole numbers and addition and subtraction of fractions. The new and innovative approaches should be appropriate for the new normal or for blended learning in limited face-to-face classes, and they should encourage independent learning among Grade 4 pupils which is now the trend in teaching and learning in the new normal.

Future researchers in educational field may further look into the teaching and learning of skills, not only essential mathematical skills, in the new normal. Aims of such studies should include enhancement of learning of skills by pupils given the new setting and modalities for teaching and learning in the new normal, and aims should also include improvement of the performance of pupils in performing and demonstrating mathematical skills.

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