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THE IMPLEMENTATION OF MATHEMATICS PROGRAM FOR GRADE 4 IN STA. BARBARA DISTRICT II

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Abstract : This study used the descriptive method of research with the use of a questionnaire as data gathering instruments in the analysis of the implementation of the Mathematics Program for Grade 4 learners in Sta. Barbara District II, Schools Division Office I Pangasinan. The assessment included the professional profile of Mathematics teachers 4 in Sta. Barbara District II in terms of their highest educational attainment, number of years of experience as Mathematics teacher and relevant in-service trainings attended; the level of performance of the Grade 4 learners in Mathematics and the problems being met by the Grade 4 teachers in the implementation of the Mathematics Program along teacher-pupil and parents related problems. The output of this study is a proposed intervention measures to address the needs identified by the Grade 4 teachers in Sta. Barbara District II. The 53 Grade 4 learners served as respondents of the study and the thirteen Mathematics teachers served as the respondents who answered the questionnaire. Frequency and Percentage and Average Weighted Mean were used to treat the sub-problems individually. Based on the analysis of the findings the professional profile of the Grade 4 Mathematics Teachers in Sta. Barbara District II, majority of the Grade 4 Mathematics are BSEED MA academic requirements.

Along the number of years teaching Mathematics, the Grade 4 Mathematics teachers belonged to 4-5 years of teaching 10 or 50 percent. In terms of the in-service trainings attended, the Grade 4 Mathematics teachers attended various in-service trainings. Level of performance of the Grade 4 learners in Mathematics, majority of the Grade 4 learners belonged to "Fair" level of performance 20 or 37.33 percent. Problems being met by the Grade 4 Mathematics Teachers. In line with the problems being met by the teachers, the teachers-related problems-AWM-2.84 which means "Moderately Serious" along learner related problem AWM-3.62 meaning "Serious" and in terms of parent-related problems AWM-3.84-"Serious". Proposed Intervention Measures to Address the Needs Identified by the Grade 4 Mathematics Teachers. The proposed intervention measures can address the needs identified by the Grade 4 Mathematics teachers.

Based on the findings made the following conclusions were drawn: The professional profile of the Grade 4 teachers must be updated, the level of performance of Grade 4 learners can still be improved and the problem being met can be given possible recommendation. Based on the conclusions drawn, the following recommendations are hereby offered. The Grade 4 Mathematics teachers should be encouraged to update their professional growth and development. The proposed intervention measures should be forwarded to higher authorities for implementation and similar studies be conducted to validate the findings of the study.

I. INTRODUCTION

The globalization of nations taking place today has resulted in a drastic change in the living and working style of people in all parts of the world. Education of its human resources is the key for the country's development and keeping up with the global community. A learning institution has to respond to the form, otherwise there will be continuous deterioration of the education of the youth. People live today in a fast paces and highly modernized society that takes the form of westernization, which is defined as "developing to a level equal to the west" the different talents and skills of man to conquer space made them more better progress. And these things would not be possible if these people did not know and study how to read (Tuguinayo, 2009). The relevance of effectiveness of the education process in our country is continually being re-examined. Towards this end, the Congressional Commission on Education (EDCOM) was created revealing in its final report that "the quality of the Philippine Education is declining continuously". The Commission stressed among others, that the colleges and technical/vocational schools are not producing the manpower that we need to develop our economy. The professional development of teachers is a highly relevant topic at this time when calls for a school improvement are on the daily agenda. Since Mathematics has been assigned as a key role for future innovation, moreover building the basic subject for many other disciplines, professional development of mathematics teachers is simplicity in the focus of any reform endeavor (Harel and Sowder, 2017). Nevertheless, educational reforms and developments constitute demands that teachers are supposed to meet. In most countries, changes in education have taken place like implementing learning standards for students and professional standards for teachers, assessment reform, as well as the use of new media in Mathematics teaching (Sowder, 2017). These trends and corresponding demands raise another level of performance development, which is more concerns with setting output orientations, derived from reform in education, politics, and research (Grouws and Schultz, 2016). Since teaching is regarded

as a "core profession" the key agent of change in today's knowledge. The modern trend in education in this country is based in the concept that the teachers and the pupils are the bases of supervisory activities. Supervision must center on the improvement of the art of teaching. In this connection, teaching should be viewed broadly to include all activities which the teacher is called upon to perform. The progress in the art of teaching is the real goal of the in-service training programs of teachers. No teacher can be competent who does not have sufficient knowledge that is authentic and recent. The teacher cannot produce himself knowledge; he must draw on paper sources for the materials which can be present to his pupils. On the teacher who would improve his professional qualifications can make progress in the art of teaching. In order to promote the professional improvement of teacher, a program of in-service education of teachers should focus directly on the improvement of pupil-learning experiences. Time is often wasted by centering the effort and attention of in-service education programs on some aspects of teaching which have no assurance of favorable influence in the learning of the pupils. The Department of Education (DepEd) has envisioned that viable programs or projects be launched to assess the performance of the schools' products. It is also recognized that in any educational program and/or activity, the first essential step after identifying the problem/need is to formulate the objective. These objectives served as the criteria by which the contents of the projects are outlined, procedures and management techniques development and evaluation measures are prepared. No education project can even start without the formulation of objectives. The final choice of objectives requires a comprehension of the philosophy, vision, mission and goals of education. This is to point out that the vision of elementary schools in the Philippines is to make every child a reader, functionally literate to cope his environment or society's demand. In the Philippines, like any other country today, education is the main force for completion and survival of the country. In the end, the school of the future in particular and the future education in general, depend not only in the right kind of the curriculum, teaching and learning methods but also on the political will and the conviction of the government to make them work. We are not cognizant of these political will and through the agency, the Department of Education curricular review and redirection are seriously being done as early as this 21st century. To actualize a richer life in our changing world, Filipino learners need an educational system that empowers them for lifelong learning or enables them to be competent in learning how to learn anywhere even among themselves. Lifelong learning meets the challenges posed by rapidly changing world, but it is nearly impossible today for anybody without functional literacy which includes essential skills in linguistic fluency or the basic communication skills in Mathematics as a learning area in 2002 Basic Education Curriculum. According to Lagman (2012) in the year 2012 marked the beginning the implementation of the Restructured Basic Education Curriculum (RBEC) in public schools nationwide. This 2002 curriculum for formal basic education aims at raising the quality of the Filipino learners and graduates and empowering the lifelong learning, which requires attainment of functional literacy to raise the bar of excellence in basic education. Sibayan (2013) revealed that teachers are not becoming good and efficient now a day that in the field, some teachers are less committed and incompetent. Sibayan added that those teachers are products of poor educational institutions which are called "Diploma mill institutions" thus, needing therefore for genuine educational institutions. A program of in-service training education of teachers should be the products of cooperative staff activity. Many efforts at in-service education have failed because they are planned by administrators or supervisors to achieve something to improve educational program which they alone can realize. Some efforts have resulted in failure because teachers have not recognized the need implied in the recommendations and have not accepted wholeheartedly the suggested plan of action. The process by which an in-service training program can be built in similar to that of teacher-pupil planning in which after initial and carefully developed interpretation of problems or issued by individuals. And so within the context of this study, the research as Grade 5 Mathematics Teacher was motivated to conduct this study in line with the implementation of the Mathematics program in Sta. Barbara District II Schools Division Office I Pangasinan. Hence the conduct of this study.

NEED OF THE STUDY.

This study proposed an intervention measures to address the identified problems of the Grade 4 teachers in Mathematics program in the implementation of Mathematics program. The focus of the study are the profile of the Grade 4 Mathematics teachers in terms of their highest educational attainment, numbers of years of experience as Grade 4 teachers; the level of performance level of the Grade 4 learners at the Payas Elementary School, Sta. Barbara District II during the school year 2023-2024 based on the results of an achievement test and the problems being met by the Grade 4 Mathematics teachers in the implementation of Mathematics Program. Based on the analysis of the findings, a proposed intervention measures to address the identified needs of the Grade 4 learners in Mathematics.

The study did not cover the implementation of the intervention measures proposed as this was the outcome of the analysis done and time constraints hinders the researcher from doing so.

3.1Population and Sample

KSE-100 index is an index of 100 companies selected from 580 companies on the basis of sector leading and market capitalization. It represents almost 80% weight of the total market capitalization of KSE. It reflects different sector company's performance and productivity. It is the performance indicator or benchmark of all listed companies of KSE. So it can be regarded as universe of the study.Non-financial firms listed at KSE-100 Index (74 companies according to the page of KSE visited on 20.5.2015) are treated as universe of the study and the study have selected sample from these companies.

The study comprised of non-financial companies listed at KSE-100 Index and 30 actively traded companies are selected on the bases of market capitalization.And 2015 is taken as base year for KSE-100 index.

3.2 Data and Sources of Data

The forty (40) Grade 4 Mathematics teachers served as respondents of the study who are presently teaching Mathematics during the conduct of this study. Table 1 presents the distribution of respondents.

3.3 Theoretical framework

Grolier (2015) stated that, Mathematics has been regarded as essential to a liberal education at least since Plato maintained that proficiency in Mathematics was a prerequisite for the study of philosophy. Today a good education in Mathematics is important because of the usefulness in careers such as environment studies, business, engineering, and medicine.

Without effective mathematics teaching it would be difficult to discern the practical order of things, to adapt to the natural environment and to understand the problems raised on technical, economic and social activities. Without Mathematics, man would be lost in the modern world.

The idea on teachers' evaluation for self-improvement. She believes that teachers feel sense of well-being and fulfillment when their pupils succeed. They fell frustrated when their learner fail to learn. This is because teachers feel responsible for helping pupils progress from one level to another which is in keeping with teacher accountability.

Teacher accountability means that every teacher is expected to account for the results of her efforts. This means every teacher is held accountable for the success or failure of her pupils.

It is, however, the belief of teachers that they do not know everything about effective teaching. But they want the opportunity to learn. They want assistance and constructive guidance in order to overcome the obstacles to teaching.

They want to posses the instructional skills and personal professional attributes that make good teachers so that they can produce better outcomes. But how will a teacher know whether she is succeeding or failing in her work?

To be able to do this, evaluation of teaching and its outcome is necessary so that the teacher can assess the performance level of the pupils.

The goal of Mathematics education is to encourage the use of precise and accurate thinking to solve the problems.

The following principles of teaching elementary school Mathematics in order that Mathematics instruction be more effective were recommended.

1. Equip the classroom with the following materials:

(a) exploratory materials like abacus, blocks and cut-outs;

(b) visual materials like pictures and posters; and (c) symbolic materials like verbal problems, exercise and topics found in books and workbooks; 2. Teach only the meaning, facts, procedures, and skills that are useful in modern life for the following purposes: (a) To develop exact teaching in situations in which consideration of quality is essential, (b) To provide a vehicle for establishing order, system and punctuality, (c) To provide pupils with enough knowledge of mathematical process and business procedures to enable them to solve efficiently the ordinary quantitative problems of everyday life; and (d) To furnish knowledge of development of numbers, weights and measures as basis for a better understanding of civilizations; 3. The selection of learning experiences should be governed by the following principle: (a) Learning through experience, (b) Based selection on the nature of the number, (c) The principles of familiarity should be applied, and (d) Generalizations are grown out of experience.

RESEARCH METHODOLOGY

This study used the descriptive method of research with the use of questionnaire as the data gathering instrument in the assessment of implementation of the Mathematics Program in Sta. Barbara District II, Schools Division Office I Pangasinan during the school year 2023-2024. The assessment focused on the professional profile of the Mathematics teachers in terms of their highest educational attainment, number of years of service and relevant in-service training attended in Mathematics; the level of performance of Grade 4 learners in Mathematics; and the problems being met by the Grade 4 Mathematics teachers in terms of teacher-pupil-parents-related problems. The output of this study is a proposed intervention measures to address the needs identified by the Grade 4 teachers in Sta. Barbara District II.

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This chapter presents the analysis and interpretation of the data gathered relative to the different sub-problems raise in the study.

Professional Profile of the Grade 4 Mathematics Teachers in Sta. Barbara District II

This section presents the professional profile of the Grade 4 Mathematics Teachers in Sta. Barbara District II, Schools Division Office I Pangasinan in terms of variables. The data is presented in Table 2 in answer to sub-problem I.

Table 2
Professional Profile of the Grade 4 Mathematics Teachers
N=40

A. **Highest Educational Attainment**	**f**	**P**
BSEED	10	25%
BSEED with MA units	10	25%
BSEED MA academic requirements	16	40%
Master of Arts in Education	4	10%
Total	**40**	**100%**
B. **Number of Years Teaching Mathematics**	**F**	**p**
0 to 3 years	8	20%
4 to 5 years	20	50%
7 to 10 years	8	20%
11 and above	4	10%
Total	**40**	**100%**
C. **Relevant In-Service Trainings Attended in Mathematics**	**F**	**p**
National	10	25%
Regional	20	50%
Division	40	100%
District	40	100%

Table 2 presents the professional profile of the Grade 4 Mathematics teachers in Sta. Barbara District II, Schools Division Office I Pangasinan. Scrutinizing the table majority of the Grade 4 Mathematics teachers are BSEED MA academic requirements 16 or 40 percent. Along the number of years of experience majority of the Mathematics teachers had 4 to 5 years of experience 20 or 50 percent and it must be noted that the respondents attended various in-service trainings called by concern authorities. This implies the need for the Grade 4 Mathematics teachers to update their professional growth and development.

Level of Performance of the Grade 4 Learners in Mathematics Based on Achievement Test

This section presents the level of performance of the Grade 4 learners in Mathematics based on achievement test results. Table 3, presents the data in answer to sub-problem 2.

Table 3
Level of Performance of the Grade 4 Learners in Mathematics Based on Achievement Test
N=53

Level of Performance	**F**	**P**
Very Satisfactorily	10	18.87%
Satisfactorily	10	18.87%
Fair	20	37.73%
Poor	13	24.53%
Total	**53**	**100%**

Table 3 presents the level of performance of the Grade 4 learners in Mathematics based on the analysis of the achievement test. It is must be noted that majority of the Grade 4 learners got a “Fair” level of performance, 20 or 37.73 percent. This means that the Grade 4 learners level of performance should be improve and to learn Mathematical skills.

Problems Being Met by the Grade 4 Mathematics Teachers in the

Implementation of Mathematics Program

This section presents the problem being met by the Grade 4 Mathematics teachers in the implementation of Mathematics Program. The data is presented in Table 4 in answer to sub-problem 3.

A. **Teacher-Related Problems**	**AWM**	**D.E**
1. Lack of basic textbooks	2.60	MS
2. Lack of teacher's guide	2.60	MS
3. Lack of ability to expound Mathematical knowledge and competencies	3.40	MS
4. Lack of budget to finance Mathematics activities		
5. Lack of supervision by the School Administrators	3.20	MS
	2.40	MS
AWM	**2.84**	**MS**
B. Pupil-Related Problems	**AWM**	**D.E**
1. Lack of interest to study Mathematical concepts	3.40	S
2. Lack of ability in problem-solving		
3. Frequent absenteeism	4.20	S
4. Lack of motivation to understand Mathematics or a subject	3.50	S
5. Lack of participation in Mathematical abilities	3.50	S
	3.50	S
AWM	**3.62**	**S**
C. **Parent-Related Problems**	**AWM**	**D.E**
1. Lack of knowledge about Mathematic Program	3.60	S
2. Lack of interest to participate in different Mathematics activities	3.60	S
3. Lukewarm attitudes of parents in Mathematics		
4. Lack of supervision to the children	4.20	S
5. Lack of time to attend meetings in mathematical.	4.20	S
	3.60	S
AWM	**3.84**	**S**

Legend:

Scale	**Range**	**Descriptive Equivalent**
5	4.50-5.30	Very Serious (VS)
4	3.50-4.49	Serious (S)
3	2.50-3.49	Moderately Serious (MS)
2	1.50-2.49	Slightly Serious (SS)
1	1.00-1.49	Not a Problem (NAP)

Table 4 presents the problems being met by the Grade 4 Mathematics teaching in Sta. Barbara District II, Schools Division Office I Pangasinan. Looking at the table there are three identified problems that need to be addressed and these are teacher-pupil-parent related problems. As gleamed from the table, the Grade 4 Mathematics teachers revealed that the most "Serious Problem" they met was pupil and parent related problems with an average weighted mean of respectively. This implies the need to address the problems identified by the concern authorities of the DepEd.

Proposed Intervention Measures to Address the Needs Identified
By the Grade 4 Mathematics Teachers

This section presents the output of the study which is a proposed intervention measures to address the needs identified by the Grade 4 Mathematics teachers in Sta. Barbara District II, Schools Division Office I Pangasinan during the school year 2023-2024.

The said intervention measures were based on the analysis of the findings particularly on the problems being met by the Grade 4 Mathematics teachers in Sta. Barbara District II. This was focused on teacher-pupil and parents related problems.

Proposed Intervention Measures to Address the Needs Identified By the Grade 4 Mathematics Teachers

Areas of Concerns	**Intervention Measures**
A. Teacher-Related Problems	A. Tap civic spirited citizens to donate books in Mathematics. - Reorientation of Grade 4 Mathematics Teachers - Solicitation to finance Mathematics activities.

B. Pupil-Related Problems C. Parent-Related Problems	B. Motivate the Grade 4 learners to study the needed Mathematical concepts and to love Mathematics as subject in the curriculum. - The Grade 4 Mathematics learners should be encouraged to participate in the various Mathematics activities. - The Grade 4 learners should be advised properly regarding absenteeism. C. Parents should be motivated and be encouraged to participate actively in different Mathematics activities. - They should supervise the schedule and time of their children.

IV. RESULTS AND DISCUSSION

This chapter presents the summary of findings. The conclusions drawn based on the findings and the recommendations offered.

SUMMARY

This study used the descriptive method of research with the use of a questionnaire as data gathering instruments in the analysis of the implementation of the Mathematics Program for Grade 4 learners in Sta. Barbara District II, Schools Division Office I Pangasinan. The assessment included the professional profile of Mathematics teachers 4 in Sta. Barbara District II in terms of their highest educational attainment, number of years of experience as Mathematics teacher and relevant in-service trainings attended; the level of performance of the Grade 4 learners in Mathematics and the problems being met by the Grade 4 teachers in the implementation of the Mathematics Program along teacher-pupil and parents related problems. The output of this study is a proposed intervention measures to address the needs identified by the Grade 4 teachers in Sta. Barbara District II. The 53 Grade 4 learners served as respondents of the study and the thirteen Mathematics teachers served as the respondents who answered the questionnaire. Frequency and Percentage and Average Weighted Mean were used to treat the sub-problems individually.

Findings:

1.0 Professional profile of the Grade 4 Mathematics Teachers in Sta. Barbara District II.

1.1 Majority of the Grade 4 Mathematics are BSEED MA academic requirements.

1.2 Along the number of years teaching Mathematics, the Grade 4 Mathematics teachers belonged to 4-5 years of teaching 10 or 50 percent.

1.3 In terms of the in-service trainings attended, the Grade 4 Mathematics teachers attended various in-service trainings.

2.0 Level of performance of the Grade 4 Learners in Mathematics.

2.1 Majority of the Grade 4 learners belonged to “Fair” level of performance 20 or 37.33 percent.

3.0 Problems being met by the Grade 4 Mathematics Teachers.

3.1 In line with the problems being met by the teachers, the teachers-related problems-AWM-2.84 which means “Moderately Serious” along pupil related problem AWM-3.62 meaning “Serious” and in terms of parent-related problems AWM-3.84-“Serious”.

4.0 Proposed Intervention Measures to Address the Needs Identified by the Grade 4 Mathematics Teachers

4.1 The proposed intervention measures can address the needs identified by the Grade 4 Mathematics teachers.

CONCLUSIONS

Based on the findings made the following conclusions were drawn:

1. The professional profile of teachers can be updated.
2. The level of performance of Grade 4 learners can still be improved.
3. Problems being met by the Grade 4 Mathematics teachers can be given possible solutions.
4. The proposed intervention measures can be implemented by higher authorities.

RECOMMENDATIONS

Based on the conclusions drawn, the following recommendations are hereby offered:

1. The Grade 4 Mathematics teachers should be encouraged to update their professional growth and development.
2. The proposed intervention measures should be forwarded to higher authorities for implementation.
3. Similar study is conducted to validate the findings of the present study.

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