IJNRD.ORG ISSN : 2456-4184
INTERNATIONAL JOURNAL OF NOVEL RESEARCH AND DEVELOPMENT (IJNRD) | IJNRD.ORG
An International Open Access, Peer-reviewed, Refereed Journal

THE IMPLEMENTATION OF MATHEMATICS PROGRAM FOR GRADE 1 IN DAGUPAN CITY

CHERRY V. DELA CRUZ
TEACHER
Lyceum Northwestern –University

CHAPTER 1
THE PROBLEM

Rationale

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, 2015).

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, 2007).

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, 2007). 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, 1996). 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 (2002) in the year 2002 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 (1993) 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 1 Mathematics Teacher was motivated to conduct this study in line with the implementation of the Mathematics program in Private Schools in San Fabian. Hence the conduct of this study.

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 pupils 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.

Conceptual Framework

Mathematics is a language that can be used to communicate visually and symbolically. It can express ideas that other languages cannot articulate with conciseness, clarity and precision. It is a way of thinking that can empower an individual to be critical, creative, logical and methodological. Mathematics is not an easy subject to learn. That is fact. The sooner the teacher accepts this, the better her students. The challenge to us teachers relies not on how we can make Mathematics easy to learn but on how we can make our students love the challenge that Mathematics presents.

Linking Mathematics instruction to children's literature has become increasingly popular in recent years for a variety reasons. Some suggest that literature connection motivates students, provokes interest, helps students connect mathematical children with different style, promote critical thinking or provides a context for using Mathematics to solve problems.

The legal basis of this study is the K to 12 Curriculum. The context of which defines its sources in terms of the following: The mandate of the 1987 Philippine Constitution, the objectives of basic education as defined in the 1982 Education Act, and the provision of Basic Education Act.

The DepEd provides the following features of the restructured basic education curriculum: a) competence in learning how learns throughout one's life in the changing world entails the secure attainment of functional literacy, which includes essential

abilities such as linguistic fluency and scientific-numerical competence. In Philippine basic education, mastery of these essentials implied that English and Filipino, Mathematics and Science are indispensable learning areas in the restructured curriculum. They are considered the basic tool subject: a) among the tool subject, is Mathematics, which emphasized through innovative and inter-disciplinary modes of instructional delivery. It develops critical thinking and problem solving.

Figure I in the paradigm of the conceptual framework using the "Input-Process-Output" Model. For input, included the professional profile of the Grade 1 Mathematics teachers in terms of their highest educational attainment, numbers of years of experience as Grade 1 teachers, relevant in service trainings attended in Mathematics, the level of the performance of the Grade 1 learners in Mathematics based on an achievement test results; the problems being met by the Grade 1 teachers in the implementation of Mathematics program. The output of the study uses a proposed intervention measures to address the identified needs of the Grade 1 teachers in the implementation of Mathematics program.

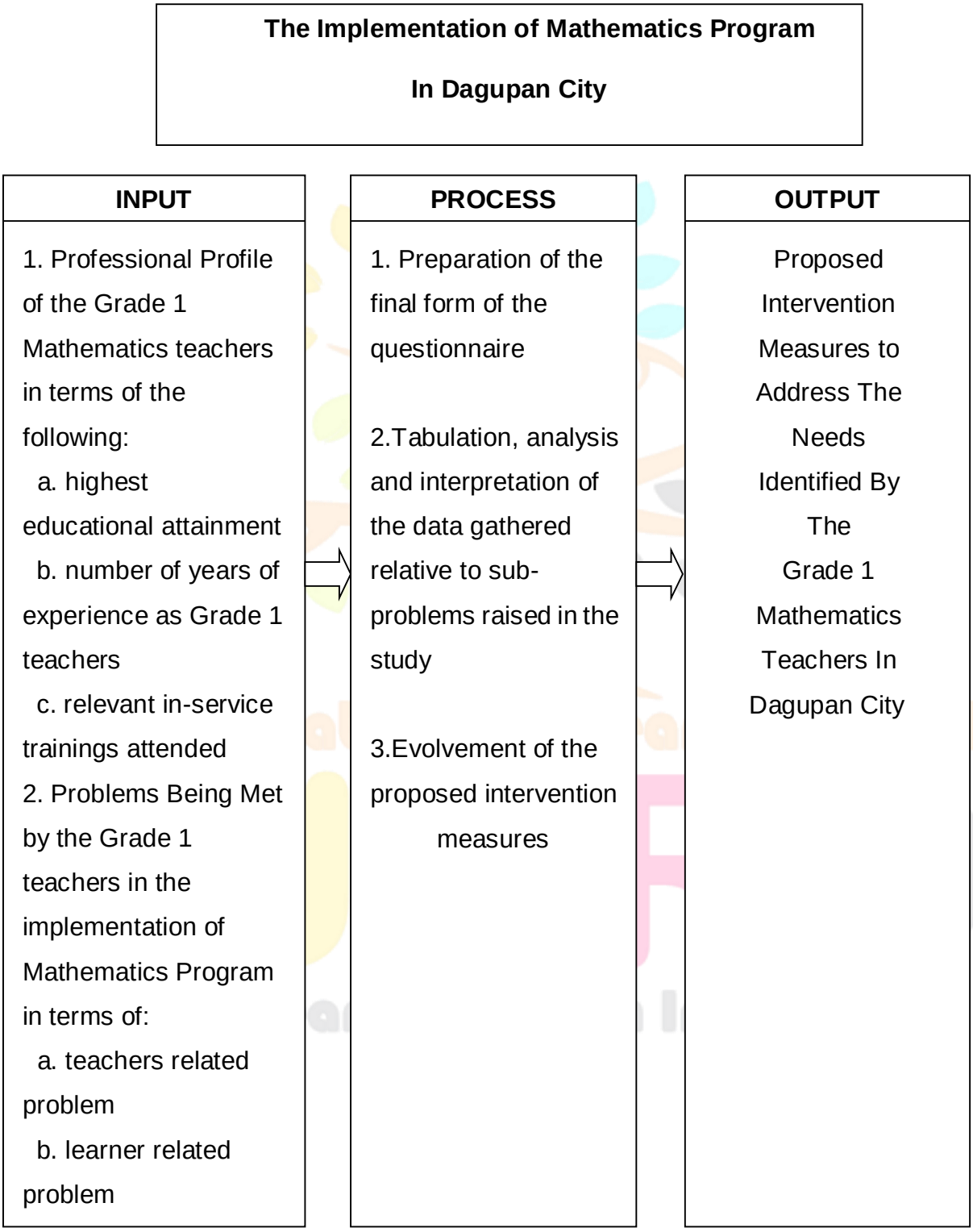

Figure I
Schematic Diagram of the Conceptual Framework of the Study

Statement of the Problem

This studies assessed the implementation of the Mathematics Program in Dagupan City during the school year 2023-2024. Specifically it sought to answer the following sub-problems;

1. What is the professional profile of the Grade 1 Mathematics in Dagupan City in terms of the following:

a) highest educational attainment
b) numbers of years of experience as Grade 1 Mathematics teacher
c) relevant in-science training attended

2. What is the level of performance of the Grade 1 learners in Mathematics based on achievement test results?

3. What are the problems being met by the Grade 1 teachers in the implementation of the Mathematics Program in term of the following and how serious are these?

a) teacher-related problem
b) pupil-related problem
c) parents-related problem

4. Based on the findings, what intervention measures can be proposed to address the needs identified by the Grade 1 Mathematics Teachers.

Basic Assumptions

This study is anchored on the following basic assumptions.

1. The proposed intervention measures can be evolved based on a needs assessment.

2. The result of the performance level of the Grade 1 learners can be used as basis for the choice in the identification of the problems of Mathematics.

Scope and Delimitation of the Study

This study proposed an intervention measures to address the identified problems of the Grade 1 teachers in Mathematics program in the implementation of Mathematics program. The focus of the study are the profile of the Grade 1 Mathematics teachers in terms of their highest educational attainment, numbers of years of experience as Grade 1 teachers; the level of performance level of the Grade 1 learners at the Balagan Elementary School Dagupan City during the school year 2023-2024 based on the results of an achievement test and the problems being met by the Grade 1 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 1 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.

Significance of the Study

Mathematics plays a very important role in the development of the pupils in solving everyday problems that confront them especially those that pertain to real-life situation. The pupils love and interest on the subject depends largely on the teachers through their teaching techniques/strategies and approaches in the teaching of the subject.

The results of this study, therefore, will benefit many groups such as the teachers, administrators, curriculum makers, the learners and the society in general.

School Administrators. They may benefit from this study since this would enlighten them in the focus of the proposed intervention measures that enable them to address the needs affecting their teachers teaching competencies.

Mathematics Teachers. This study can enlighten them on the different problems being met in the teaching of Mathematics in the implementation of Mathematics program. The intervention measures if implemented can improve the level of their competencies.

Curriculum Makers. The output of this study will help them in the formulation of policies and guidelines in the teaching of Mathematics as a tool subject in the K to 12 Curriculum.

Mathematics Grade 1 Learners. Being the center of education they will be benefited by the results of this study to improve their academic performance in Mathematics.

The Researcher Herself. Results of this study will serve as frame of references in improving her teaching competencies in Mathematics.

Other Researchers. The results of this study may also encourage other researcher to undertake similar studies on a wider scale.

The Researcher Herself. The results of this study will serve as a challenge to improve her teaching particularly in Mathematics with an end in view of improving the academic performance level of the Grade 1 learners.

Definition of Terms

For a better understanding of this study, the following terms are defined operationally and/or lexically.

Achievement Test. This refers to a test administered to the Grade 1 learners at the middle of the school year in order to identify their strengths and weaknesses.

Grade 1 Learners. They served as respondents of the study wherein their performance level in Mathematics was evaluated to determine their intelligence level.

Mathematics. This is one of the basic subject in the K to 12 Curriculum which contribute to the acquisition of functional literacy of the pupils through their mastery skills of numeracy, computation and problem solving. In this study, it is the performance level of the Grade 1 learners in Mathematics.

Profile. As used in this study, it is the description of the Grade 1 Mathematics learners in defining their performance in Mathematics to the intelligence level.

Performance. This refers to the Grade point average of the Grade 1 learners in Mathematics when categorized accordingly to intelligent level.

LITERATURE

Concepts on the Development of Critical Thinking Skills Applicable in the Teaching of Mathematics

The K to 12 Curriculum aims at empowering the Filipino learner in our rapidly changing world from lifelong learning, competent in learning how to learn throughout one's life by attaining functional literacy, which include essential abilities in scientific-numerical competence. Mathematics is an indispensable learning area because it is one of the five basic tool subjects that need to be well taught and learned. By basic tool subject, it means that the skills in Mathematics will lead one other subjects dealing on figures to solve everyday problems.

And so the features of K to 12 Curriculum are as follows: a) restructuring of the learning areas to five (English, Filipino, Mathematics, Science and Makabayan); b) stronger integration of competencies and values; c) greater emphasis on the learning process and interdisciplinary modes of teaching, and d) increase time for tasks to gain mastery of competencies of the basic tool subjects.

Concepts on Ways to Improve a Teacher's Competencies in Mathematics Instruction

To make the teaching of Mathematics enjoyable and fruitful, a teacher must not only consider the personality of the pupils he teaches but also to work on ways to improve his personality and qualities as a teacher as well.

On teacher's personality and qualities, Lardizabal (2015), said to know what makes a good teacher, one must have to know the task of a teacher experiences of successful teachers have shown that the teacher's job is not confined solely to the transmission of knowledge and information. Some modern technological devices such as teaching machines, television, films and computers can do that. What is more important is the teacher's personal influence in promoting the development of basic skills, understanding, work habits, desirable attitudes, values, judgment and adequate personal adjustment of the learners. It can be said that teaching is effective to the extent that the teachers acts in ways that are favorable to the development of the learner.

Studies point two major categories in which characteristics of an effective teacher may be grouped: (1) professional qualities and (2) personal qualities.

From various studies made on this matter, the following emerged as basic qualities that have definite relationship to the teaching competence.

1. Mastery of the subject/field one teaches.
2. Understanding of the learner. Understanding of teaching principles and skills in the use of techniques for their implementation.
3. General understanding of other branches of knowledge. He must be able to show how his subjects relate with other fields.
4. Understanding and appreciation of the teaching profession. The degree of a teacher's success depends to a great extent on his attitude towards his job.

A teacher must understand the importance of his profession as socially useful work and recognize its rewards as well as its restrictions and trials. He must be aware of the value of professional organizations to himself and to education in general. Lastly, he must be aware of the need for keeping abreast with changes in education through various in-service education programs.

Personal characteristics are related to the five aspects of personality, intellectual, social, physical emotional and moral. A good teacher must be intellectually, socially. Physically, emotionally and morally capable person.

Along this view of thought, Ornstein (2012), describes seven (7) things than an effective teacher should do:

1. Effective teachers develop good managerial techniques. They make sure that the students know what to expect, they make certain that student know what to do if they need help; they follow through with reminders and rewards to enforce rules; and they do not respond to discipline problems emotionally.
2. Effective teachers have a clear, systematic method of teaching. They proceed in small steps, provide example review and explanation before proceeding to the next step, ask questions and check for understanding, and provide systematic feedback and correction.
3. Effective teachers provide students with relevant academic activities and see to it that students spend and adequate amount of time actually engaged in these learning activities.
4. Effective teachers ask appropriate questions in a manner that ensures participation and facilitates mastery of academic content questioning focuses on both facts and abstract thinking.
5. Effective teachers emphasizes independent and learning to learn. They teach students to apply concepts, solve problems and monitor their own comprehension.
6. Effective teachers try to move toward high-order thinking skills and independent learning by motivating students to learn and by using appropriate material and activities.
7. Effective teachers are able to group students for individualized and small-group instructions. They are able to work with more than one student or group at a time.

Sta. Maria (2016), further strengthened the above-cited idea when she said that a teacher who has full understanding of what he is to teach, knows sound teaching techniques and is enthusiastic in his approach to teach which inspires pupils to enjoy the wonders of mathematics, can spell the difference in teaching.

Welchmann-Tischler (2012) on the other hand, said that mathematically literate students should view mathematics as a way of looking at their environment that aids understanding and adds insight. This attitude towards mathematics can be fostered by the teacher in the daily routines of the classroom. Mathematical experiences need not be restricted to the "Math Period" but can be incorporated throughout the school day. The importance of making mathematical connections both within mathematics and between mathematics and other curriculum areas, is emphasized by the inclusion of "mathematical connections" as one of the curriculum standards for school mathematics.

Salazar (2011), stated that for mathematics to be well-learned, it should be well taught. To be well taught, teachers should be create the best possible conditions for teaching and learning mathematics.

Sta. Maria (2016), went to say that the language to be used in teaching mathematics should be simple enough and within the reading ability of the students.

Quinto (2015) provided the answer to the question, "How should arithmetic be taught?" They are the following:

1. Help children to see sense in what they learn.
2. Insure orderly development in quantitative thinking.
3. Arrange to have children activities harmonize with the purpose of arithmetic.
4. Be as much concerned with the way children think of numbers as we are with the result of their thinking.
5. Withhold symbols until we have developed meanings, and drill until we have developed understanding.
6. Teach at the rate at which children learn.
7. Present arithmetic as an object of natural learning.
8. Organize instruction spirally.
9. Children must know what they are to learn and how well they are learning it.

Afable (2016) confirmed the idea of Quinto. She said that to improve Mathematics instruction, the current trend is for teachers to use a brief statement of selected principles. The following are guidelines that provide corrected approaches to learning and teaching.

1. Purpose should be clarified in terms of specific objectives.
2. Program of instruction should be clearly planned.
3. Varied activities and materials should be used critically.
4. Individual differences should be given due consideration.
5. There should be an active teacher guidance.
6. Systematic evaluation of pupil's progress should be enhanced.
7. The child should be encouraged to develop a wholesome self-concept and acceptance.
8. There should be a democratic atmosphere inside and outside the classroom.

Angel (2011) stated that the learning and teaching of mathematics involves working with children in three districts, yet frequently related stress namely, concepts, skills and applications. Establishing a balance among these three elements has important implications for the quality of mathematics program. Pupils need to experience and appreciate the link between these three so that they will gain competence and confidence in dealing with mathematical situations recently.

The first area involves the learning of mathematical content – the ideas, concepts and relationships that are at the heart of the subject. Since "one cannot give grounded on the subject matter of mathematics, well beyond the level of any materials which he expected to teach, in order that he may inspire the co1nfidence and respect of his pupils.

The second area involves learning specific techniques and skills that are necessary for being able to move with ease in the world of mathematical ideas and the world of everyday experience. It is not enough that a teacher knows his subject matter but he must be able to impart it properly and effectively to his students or pupils.

From mathematical ideas and skills, some applications that related mathematics to a variety of other situations must be taken up. Such situations can provide a motivation for learning of mathematics as well as stimulate reflective thought. Application of concepts can be done by:

1. Indigenizing curriculum materials. Solve problems related to business and industrial activities in the community.
2. Integrate values by formulating value-laden problems.
3. Integrate government thrusts and programs.

Learners learn best if the condition around them is favorable to them. What are the conditions for teaching and learning mathematics? Salazar (2001), stated the following:

1. Learners learn best by doing. So the teacher should provide pupils plenty of manipulative activities. These are activities which allow the pupils to manipulate, touch and hold objects such as measuring devices, geoboards, models and other dimensional objects.
2. Learners learn best if they are given opportunities to apply reasoning practices to validate their own thinking. Pupils should be encourage to explore and investigate number patterns and relationships as extensions of the class discussions or as project after a unit has been covered.
3. Learners learn best if they are actively participating in the teaching learning process, if they are given the opportunities to express themselves, to discuss and interact with their teacher and classmates. Pupils should feel free to ask questions, to give their opinions and explore ideas. This can be done through small-group cooperative learning because when pupils work in groups, they are able to interact with each other in a natural and meaningfully way.
4. Learners learn best of the mathematics inside the classroom is linked with the mathematics in the real world. To reinforce the learning inside the classroom, the pupils should be taken out once in a while so that they can apply such learning to real-life situations.
5. Learners learn best if they enjoy what they are doing. The learner should cause excitement and said variety to the instructional procedures. One way of doing this is through mathematical games.
6. Learners learn best if the learning is focused and organized around problem solving. Before, the major focus of mathematics curriculum used to be on computations and not on problem solving. Technology however, has progressed to the point that a computation alone is no longer a sealable skill. Machines can easily handle computations but problem solving is still the capability of human minds.

Greenes (2015), stated that to enhance students understanding of mathematics, they should be presented with problems that provoke curiosity and stimulate the need to described, to justify, to explain, and to create. Students must have the opportunity to share thoughts with others brainstorm, and wrestle with ideas, and to get feedback and make revisions to the first drafts of their thinking.

Ornstein (2016), said that teachers can help students learn different learning skills by means of the following:

1. Teachers do not merely mention a particular learning skill, they direct and explain what a particular skill is and how to use it.
2. Teachers promote progressively more difficult items for students to practice on until students can perform the task on their own.
3. Teachers determine whether student can perform the task and use related skills and then give the students opportunities to apply the skills to new and different learning situations.
4. Teachers identify the processes or thinking operations students use to perform task or solve problems by asking appropriate questions and listening to students' responses.

5. Teachers learn to use diagnostic assessment tools to make appropriate connections between learning skills and concepts or problems being taught in the particular subject.

Concepts on Teaching Methods

Strategies/Techniques

The subject of teaching according to Aquino (2015) generally makes no distinction between method of teaching and technique of teaching. Writings in educational theory and practiced have presented different classroom procedures as methods of teaching or techniques of teaching. These two terms have different meanings and values but both are integrated in any teaching or learning situation. The method of teaching covers the psychological processes involved in learning and the technique of teaching covers the use of devices and the application of principles in teaching in order to affect the proper development of the individual pupil. The term technique is also applied in the selection of devices and methods to be used as well as to the way in which they are used. Method relates to the learning performance and method of teaching involves steps to guide the mental processes.

Likewise, Aquino (2015), explains that instructional methods are the orderly procedures that direct the learners in developing skills and habits and assist them to acquire knowledge and attitudes.

A teacher can employ several teaching techniques to make the teaching more meaningful and effective. He can also make the use of some appropriate instructional materials and resources such as printed materials, audio-visual materials, and community resources. Along with these, the teacher should know the sequences in the teaching-learning sequence, namely, memory and information output, deriving meaning, attaching significance, and action.

A teaching method or teaching strategy is good if it provides for individual differences, if it utilizes the principle of learning, if it stimulates thinking and reasoning, if it provides for growth and development and if it provides the desired results. There is no single best method, procedures and strategies. The ideal for the teacher is to have knowledge and skills using a variety of methods, procedures and techniques so that he will be prepared to face the challenge of any teaching-learning situation. The instructional objectives and the nature of the learners are of prime considerations in determining what method/procedure of technique to use (Aquino, 1986).

Lankord (2015) stated that a teacher can plan the strategy he will use in his class by doing oral interviews with the pupils. The interviews helps the teacher in deciding whether or not a pupil's pattern of thinking follows the computational strategy the teacher is teaching him. The teacher must decide whether or not a pupil's individual and unorthodox strategy needs changing.

Angel (2013) mentioned the following strategies and techniques that could be adopted in the teaching of mathematics.

1. Involvement like an individual recitation of the multiplication table.
2. Teaching by analogy like giving the relationship between addition and multiplication.
3. Teaching by discovery in which pupils are led to discover concepts though activities.
4. Analysis which uses breaking down concepts into step by step explanation of it. This could be applied in finding the areas of polygon, by partitioning.
5. Direct presentation or the use of audio-visual displays to rapidly disseminate information.
6. Teaching by rules using inductive and the deductive methods in teaching.
7. Teaching by definition.
8. Teaching by example.
9. Teaching by using models.
10. Teaching by games and simulation or role-playing.
11. Teaching through song like singing the multiplication table.
12. Investigation work where pupils may think of alternative strategies.
13. Programmed instruction involving modules, self-learning kits and correspondence courses.

Just like Angel, Sumulong (2015) stated that the discovery approach in teaching mathematics is very much recommended. He also explained that the learning of mathematics lies in good motivation like stories, jokes and pictures, which aim to help the teachers awake pupils' interest.

Dirkes (1991) mentioned that one very good strategy for teaching mathematics is through the use of drawings. She said that students who make drawings of mathematical concepts really think about mathematics. She said that those who trust their own thinking become solvers who play with ideas on paper. They compare drawings to numbers and equations and look at the whole problem as well as the details. These thinking strategies contribute well to the construction of mathematical ideas.

Martz (2012) likewise mentioned one good strategy for solving problems. This method is the playlet approach. Students are asked to play roles mentioned in a problem.

Simple manipulative devices, like for example, materials for checking attendance can be used to exercise mathematical thinking processes in a variety of contexts. A simple nametag can be used to teach about intersecting sets.

The RBEC emphasizes that students learn more when they are engaged in hands-on activities, explore, discover on their own, generalize, and apply their learning to their own lives.

Greenees (2016) stated that there are times when the teacher will initiate the discussion about mathematics, at other times, the teacher will add momentum to the discussions and at still others, the teacher will let the students take the reins and talk about mathematics. As students carry on their discussions, teachers will gain greater insights into students' degree of understanding of mathematics and will be better prepared to help students become successful learners and users of mathematics.

Buswel (2016) in his book, stated that the purpose of Arithmetic in the elementary curriculum is to develop intelligence in dealing with numbers in the child now, in the adult later. When arithmetic is so conceived, the key words are not drill, speed, and mechanics but rather understanding, meaning, insights and significance, and instruction so designed so that children will both understand arithmetic and experience its values.

According to Sobel and Maletsjy (2015) the art of teaching is the art of communication in interest and ideas, and the teacher who can express and illustrate these in a variety of ways stands the best chance of getting them across. Therefore, every teacher should be well-equipped with instructional aids and materials to be able to convey better ideas he wants to impart to his students. Instructional materials are essential for teacher as spices are for the pastry chef. They add variety, the depth and the breath which make the learning process pleasant and meaningful.

The use of visual aids and materials in teaching any subject for that matter is not new. The successful, dynamic and energetic teacher is always searching for ways to make his instruction more meaningful and effective. He knows that through the proper use of teaching materials he may help build in pupils the proper attitudes and skills he wants them to develop (Peralta, et al. 1992).

Although instructional aids and materials are a necessary part in the curriculum, they are not magic: teachers will have to teach, and pupils still have to study. But the teacher using instructional aids and materials will be teaching in an atmosphere where meaning become clearer and where what the pupils learn will be more helpful in solving his future problems.

On the establishment of successful teaching strategies for all students the California Department of Education (2017) presents the following guidelines for teachers:

1. Establish a safe environment in which the students are encouraged to talk and to ask questions freely when they do not understand.
2. Use a wide variety of ways to explain a concept or assignment. When appropriate, the concept of assignment may be depicted in graphic or pictorial form, with manipulative, or with real objects to accompany oral instruction and written instructions.
3. Provide assistance in the specific and general vocabulary to be used for each lesson prior to the lesson and the use reinforcement of additional practice afterward. Instructional resources and instruction should be monitored for ambiguities or language that would be confusing, such as idioms.
4. Set up tutoring situations that offer additional assistance. Tutoring by a qualified researcher is optimal. Peer of cross-age tutoring should be designed that it does not detract from the instructional time of either the tutor or tutee, and it should be supervised.
5. Extend the learning time by establishing a longer school day, a double period of mathematical classes, weekend classes and inter-sessions or summer classes.
6. Enlist the help of parents at home when possible.
7. Establish special sessions to prepare students for unfamiliar testing situations.
8. Ask each student frequently to communicate his or her understanding of the concept, problem, or assignment. Students should be asked to verbalize or write down what they know, thereby providing immediate insight into their thinking and level of understanding.
9. Use a variety of ways to check frequently for understanding. When student does not understand, analyze why. This analysis may involve breaking the problem into parts to determine exactly where the student became confused.
10. Allow students to demonstrate their understanding and abilities in a variety of ways while reinforcing modes of communication that are standard on the school curricula.

STUDIES

Arevalo (2016) made a study on the difficulties encountered by the pupils in Mathematics V in the selected public elementary school of Area II, Leyte Division. She found out that pupils lack the ability to solve word problems related to Mathematics because of their poor reading comprehension and non-mastery by pupils of the four fundamental operations.

Barrozo's (2001) study sought to find out the levels of difficulties in the five steps in problem-solving in Mathematics of the Grade 6 pupils from the eight selected schools of District III, Dagupan City. The descriptive-normative survey method was used with a diagnostic test and a questionnaire serving as data-gathering instruments. The diagnostic test in problem solving was used to determine the Grade 6 pupils' level of difficulties in the five steps in problem solving and how these compared when the Grade 6 pupils were grouped according to sex. The questionnaire, on the other hand, was used to gather the suggestions of the Mathematics teachers for improving the problem solving ability of their pupils. Based on the findings made, Barrozo concluded that: (1) Both the Central School and Barangay School groups of Grade 6 pupils had higher levels of difficulties in identifying the process(es) to be used, writing the equation and solving for the right answers along ratio-proportion and percent and rational numbers but the Central School pupils were generally more superior to the Barangay pupils in their performance in problem-solving; (2) School-type has something to do with performance in problem-solving; (3) Sex has nothing to do with performance in problem-solving; and (4) The teachers suggested strategies based on electric agreement of theories of learning can help improve problem-solving abilities of pupils of all ability levels.

Cleofas (2010) study aimed to assess the academic performance in Mathematics of Grade one pupils in selected public elementary schools in the four districts of Midsayap, Cotabato Division during the school year 1992-2000. The researcher employed the descriptive method to determine the pupils' academic performance in Mathematics in terms of the achievement test results and the final grades earned in Mathematics and to establish the relationship between these two variables. The respondents tapped for the study are 500 grade one pupils. Data used in the study were obtained from three sources, namely: (a) Achievement Test in Mathematics I composed of 32 items, (b) Pupils' characteristics in terms of sex, location of school; and parents; employment status; and (c) Final grades in Mathematics I. Usable were supplied by 100 percent of the sampled grade one pupils who were chosen through a two-step random sampling procedure. The statistical tools used were mainly descriptive measures such as frequencies and percentage, means and standard deviation. ANOVA, t-test, coefficients of correlations r and coefficient of determination.

Among others, Cleofas found out the following relative to the performance in the Mathematics achievement test and selected pupils' characteristics.

1. The pupil's sex is not significantly related to their performance in all content areas as shown by the t-values with their corresponding probability values.
2. School location is significantly related to pupils' performance on Whole Numbers, Geometry, Measurement, and Total Scores in favor of pupils in town schools, but insignificantly related to pupils' performance on Rational Numbers as shown by the t-values with their corresponding probability values.
3. Employment status of parents is insignificantly related to pupils' performance on Whole Numbers, Geometry, Measurement, and Total Scores in favor of pupils with employed parents but insignificantly related to pupils' performance on Rational Numbers as shown by the t-values and corresponding probability values.
4. There are statistically significant differences in the pupils' performance in each content area and in the total scores in favor of the pupils with employed parents as shown by their t-values and corresponding probability values. Likewise, there is a significant difference in the total scores of the two groups in favor of the pupils with employed parents as revealed by the t-values and the probability value.

Dela Cruz (2015) undertook the descriptive correlation of research on the analysis of teachers' mastery of Elementary Mathematics. Her respondents were (40) teachers teaching Grade 6 Elementary Mathematics in the public elementary schools of Dagupan city during the school year 1995-1996. Her teacher respondents took the Mathematics component of the National Elementary Assessment Test (NEAT) during the school year 1995-1996. Her findings revealed that teachers who scored higher in the test were the teachers who took more mathematics subjects in college and those who have been teaching Elementary Mathematics for several years. However, the teachers who scored low in the test were generally those who simply completed the minimum number of Mathematics unit.

Another study regarding the relationship of performance of pupils in the NEAT and some variables was conducted by Asiao (2016). Asiao's study revealed that pupils performance in the NEAT and in the District Final Achievement Test (DFAT) are significantly correlated to their final average. Furthermore, NEAT and DFAT scores of the pupils are positively and significantly correlated with each other.

Escobar (2016) proposed instructional intervention to help high school overcome the difficulties they encountered in Mathematics. She also determined the relationship between the students' socio-demographic characteristics and their performance. She also determined the factor contributory to the students' difficulties in Mathematics.

Based on her findings, Escobar drew the following conclusions:

1. Socio-demographic characteristics have a significant effect on the students' mathematics performance except age, educational attainment of parents, and size of the family.
2. Sex, year level and family income have high effects on the mathematics performance of students while age, educational attainment of parents and size of family have no bearings on their performance.
3. The null hypothesis stating that mathematics performance is not significantly related to the socio-demographic factors such as sex, year level and family income was rejected, while stating that mathematics performance is not significantly related to the socio-demographic factors such as age, educational attainment of parents and family size is accepted.
4. The areas which is the most difficult in mathematics to students was problem-solving.
5. The most contributory factor to mathematics difficulties was the attitudinal factor. Students with good attitudes towards mathematics encountered less difficulty than those students with negative attitudes.
6. The home related factor also caused the students' difficulties in Mathematics. These factors include household chores that the students have to do.
7. School related factors like too many requirements in a subject and too large classes also caused difficulties in Mathematics for the students.

Gayodan (2015) conducted a study on the teaching of Mathematics in the public elementary schools in Western Tabuk District. The questionnaire was the main tool used it gathering the data needed. Her findings revealed that the teachers perceived the methods used in teaching Mathematics to be moderately used while the pupils thought of them as much used. The comparison between the perceptions revealed a rejection of the null hypothesis. As to the level of adequacy of instructional materials, the teachers perceived them to be less adequate while the pupils perceived them to be moderately adequate. The t-test showed a significant difference between the perceptions of the two groups. It was also discovered that the teachers and pupils perceived that evaluation techniques were much used in identifying progress of pupils. The teachers and pupils did not significantly differ in their perceptions hence the acceptance to the null hypothesis. Likewise, it was confirmed that the problems encountered in teaching and learning mathematics are moderately serious. A comparison between the perceptions of the two groups of respondents showed no significant difference. The null hypothesis was accepted.

Gonzal (2015) determine the influence of environment on the performance in Mathematics of fourth year students in Siena College of Taytay during the school year 2017-2018.

The researcher gathered the data by asking the respondents to answer the questionnaire. Performances in the different areas of mathematics were obtained through the test results. Problems encountered at home were revealed through the checklist prepared by the researcher with the help of the guidance counselor. The mean and the standard deviation were computed to determine the performance of the respondents and the problems that greatly influence the performance of the students in mathematics.

To determine whether or not the variables significantly influence performance, chi-square was computed for. Multiple regression analysis was also used to determine which of the variables best influence the students' performance in mathematics.

Based on her findings and conclusions, Gonzal offered the following recommendations.

1. Since studying Mathematics is like building a pyramid, there should be a thorough investigation on the contents of the different areas of mathematics to find out the particular point where the difficulty lies so that longer time could be spend for the better understanding of the topic.
2. The schools should conduct seminar-workshop for parents to update their knowledge in mathematics.
3. Future researchers may undertake the following:

3.1. Production of modules that will help the students to have better retention of the different lessons in Mathematics.

3.2. Study on how other problems at home could affect students' performance in mathematics.

Laroya (2016) sought to analyze the mathematics competence of Grade 6 teachers on the basis of their performance in the mathematics component of the National Elementary Achievement Test.

The descriptive method of research was used to determine the existing conditions concerning the mathematics competence of Grade 6 teachers and the relationship between their competencies and such teacher related variables as number of units earned in mathematics, the number of years of teaching mathematics and related in-service trainings attended in mathematics and their pupils' performance in mathematics.

The research instruments used in gathering data from the respondents were a questionnaire and a National Education Testing Research Center report on pupil performance in the NEAT.

Based on the findings made and the conclusion drawn, Laroya made the following recommendations: 1) Mathematics teachers should be provided with a continuing in-service program to upgrade their competencies not only in their mastery of content but also on their familiarity with appropriate approaches and methodologies; 2) A similar study should be conducted in other districts and divisions but should include such other variables as strategies used in teaching difficulties in mathematics and an item analysis of

the mathematics component of the NEAT; 3) The Minimum Learning Competencies (MLC) and instructional materials should be upgraded. This is necessary to get abreast in the rapid development of modern strategies, new methods, new trends, new techniques and approaches in education; and 4) The in-service training modules that were prepared as a consequence of this study should be made available to all the teachers for them to acquire functional skills in learning areas where they were found to be wanting. Their use of the modules should be closely monitored by their respective school administrators.

Madriaga (2000) sought to determine the performance of Grade 5 pupils in solving word problems in Mathematics in District IV, Olongapo City during the school year 1999-2000. It also looked into the implications of the findings to Mathematics instruction.

She used the descriptive method of research with a teacher-made test which was constructed on the basis of the Elementary Learning Competence (ELC) in Mathematics V.

Based on the findings generated from the analysis and interpretation of data gathered, the following were some of the conclusions drawn.

1. The pupil-respondents exhibited "very good" performance level in the test in solving word problems that involved whole numbers and money value whereas they were "good" in the items which involved fractions, decimals from plane figures.
2. There was no significant difference in the performance level of the Grade 5 pupils in solving word problems when they were grouped according to sex and school enrolled in.
3. In order to mitigate problems in Mathematics instruction, the teachers and school administrators should work hand-in-hand in the promotion of pupils' mastery of computational skills. This could be done through classroom activities such as extra study, remedial work, increase time allotment, and close supervision of Mathematics classes.

Ngagan (2002) appraised the status of the teaching of elementary Mathematics in Grade 6 in Western District of Mountain Province during the school year 2000-2001. In the appraisal, she covered the objectives, methods and techniques, instructional materials, devices and aids, problems encountered in teaching and need of measures proposed by teachers to improve the teaching and need of measures proposed by teachers to improve the teaching of Mathematics in Grade 6. She used 105 respondents broken as follows: 28 from Bauco, 15 from Basao, 18 from Sabangan, 15 from Tadian. Using the descriptive survey method of research and various statistical treatments such as total weighted point, average weighted means, analysis of variance and T-test, the following findings were arrived at:

1. The extent of attainment of the objectives was "moderate" for whole numbers, rational numbers, geometry measurements, graphs, maps and scaled in the four districts except Saga, which was "much attained".
2. The degrees of effectiveness of methods and techniques were: on methods, it was "very effective" although some groups of teachers use the lower limits and some groups of teachers used the higher limits which fall under "very efficient".
3. The level of adequacy of instructional materials, devices and aids was "moderate".
4. Some problems encountered by the teachers in the teaching of mathematics were "very much serious".
5. There were no significant differences on while numbers under objectives, methods, problems and measure proposed.
6. There were significant differences on rational numbers, geometry, measurement and scale, maps and graphs; under objectives on technique, and on instructional materials, devices and aids in the teaching of Elementary Mathematics in the Western District of Mountain Province as perceived by the respondents.

San Jose (2002) compared the Mathematics achievement of Grade 5 pupils in the central and barrio schools of Orion District during the school year 2010-2011.

The study made use of the descriptive-normative survey method with the questionnaire intended to gather data about the personal attributed of the respondents and an achievement test in Grade 1 Mathematics which was administered to the subjects to determine their achievement level.

A total of 175 pupils from the central school and 175 pupils from the barrio schools were involved. Equal numbers of male and female for each of the two groups was arrived through random sampling. The obtained data were subjected to several statistical tests.

In light of the findings made, San Jose drew the following conclusions:

1. The pupil-respondents were equally distributed among the central and barrio schools and the same number was used in dealing with the variables, namely; sex, parents' monthly income, parents' education and location of school.
2. Generally speaking, the mathematical achievement test is "moderately difficult" for the Grade 1 pupils in the central and barrio schools of Onion District.

Breaking down the test items into sub-areas, the test items on whole numbers and graphs and maps and scales were "moderately difficult" while those on rational numbers, geometry and measurement were "difficult".

3. On the average, the grade five pupils of Onion District during the school year 2017-2018 achieved a performance level in Mathematics which was below the mastery level. Regarding their performance levels on sub-areas, they had "satisfactory" achievement on while numbers, geometry and graphs, and maps and scales; "unsatisfactory" achievement on rational numbers; and "very unsatisfactory" achievement on measurement.

Some learning gains are transitory.

4. There is no significant difference in the Mathematics achievement level between the central and the barrio school pupils. The location of school is not enough to effect a significant differences in Mathematics achievement because both schools are using the same curriculum and textbooks and the teachers are practically of the same level of education.
5. No significant relationship exist between the grade five pupils Mathematics achievement and sex, in favor of the females, and also parents education in the central schools but not in the barrio schools. The other two independent variables, namely; sex and educational attainment of parents has insignificant relationship with the Mathematics achievement of the pupil-respondents.

Sausa (2001) conducted a study on the mathematics teaching problems of elementary teachers in Central Luzon Conference and South Central Luzon Mission. She found out that out of a total of 73 specific problems that teachers encounter, 9 or 12.33 percent are moderate problems are on instructional materials and facilities and equipment while one-third are the pursuit of in-service training.

Contribution of the Reviewed Literature and Studies to the Present Study

This study was guided by the reviewed literature and studies in identification of the research problems. Direction was provided by the K to 12 Curriculum of the Department of Education the implementation of which started in the school year 2010. It served as the driving force for the conduct of the study which has something to do with the assessment of the implementation of the Mathematics program.

The development of the questionnaire which is the data-gathering instrument in this study was guided by Garcia (2009) and those of the other reviewed thesis.

CHAPTER 2
METHODOLOGY

This chapter presents the research design, sources of data, instrumentation and data collection and tools for data analysis relative to the different sub-problems.

Research Design

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 Dagupan City, 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 1 learners in Mathematics; and the problems being met by the Grade 1 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 1 teachers in Dagupan City.

Sources of Data

The thirty (30) Grade 1 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.

Table 1
Distribution of Respondents
N = 30

Schools		Number of Grade 1 Math Teachers
1.	Calmay Elementary School	4
2.	Carael Elementary School	3
3.	Juan P. Guadiz Elementary School	3
4.	Lomboy Elementary School	3
5.	Pantal Elementary School	5
6.	Pugaro Elementary School	3
7.	Salapingao Elementary School	3
8.	Suit Elementary School	3
9.	T. Ayson-Rosario Elementary School	3
	Total	**30**

Instrumentation of Data Collection

This study focused on the implementation of the Mathematics program for Grade 1 learners in Dagupan City with a questionnaire as the data gathering instrument. The questionnaire composed of two parts. Part I-deals on the professional profile of the Grade 1 Mathematics teachers in terms of their highest educational attainment, number of years of experience and relevant in-service trainings attended in Mathematics.

Part II-focused on the problems being met by the Grade 1 Mathematics teachers in terms of teacher-pupil-parent related problems. The output of this study is a proposed intervention measure to address the needs identified by the Grade 1 teachers in Dagupan City.

The items in the questionnaire were adopted from the various readings of thesis/dissertation and the final draft was shown to her thesis adviser for her suggestions which were incorporated in the questionnaire. The researcher asked permission from the Schools Division Superintendents to float her questionnaire to the Mathematics teachers in Dagupan City. The researcher personally distributed the questionnaire and retrieved to ensure 100 percent retrieval.

Tools for Data Analysis

The following statistical tools were used to treat the data by sub-problems.

For sub-problems 1 and 2 in line with the professional profile of the Grade 1 Mathematics teachers and the level of performance of the Grade 1 learners, frequency and percentage was used.

For sub-problem 3-on the problems being met by the Grade 1 teachers in the implementation of Mathematics Program, Average Weighted Mean was used. The formula is:

$$AWM = \frac{Efx}{N}$$

Where:

AWM=Average Weighted Mean
Efx=Distributed Frequency
N=Number of Respondents

CHAPTER 3
PRESENTATION, ANALYSIS AND INTERPRETATION OF DATA

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 1 Mathematics Teachers in Dagupan City

This section presents the professional profile of the Grade 1 Mathematics Teachers in Dagupan City in terms of variables. The data is presented in Table 2 in answer to sub-problem I.

Table 2
Professional Profile of the Grade 1 Mathematics Teachers
N=30

A. Highest Educational Attainment	**F**	**percent**
BSEED	8	26.66%
BSEED with MA Units	10	33.33%
BSEED Academic Requirements in MAED	7	23.33%
MASTER of Arts in Education	5	16.66%
Total	**30**	**99.99%**
B. Number of years' experience of a Teacher Filipino 3	**F**	**percent**
0 - 2 years	7	23.33%
3 – 5 years	16	53.33%
6 years and above	7	23.33%
Total	**30**	**99.99%**
C. Relevant In-Service Trainings Attended	**f**	**percent**
Regional Level	15	50.00%
Division Level	30	100%
District Level	30	100%

Table 2 presents the professional profile of the Grade 1 Mathematics Teachers in Dagupan City. Scrutinizing the table majority of the Grade 1 Mathematics teachers are BEED MA academic requirements 7 or 23.33 percent. Along the number of years of experience majority of the Mathematics teachers had 3 to 5 years of experience 16 or 53.33 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 1 Mathematics teachers to update their professional growth and development.

Level of Performance of the Grade 1 Learners in Mathematics Based on Achievement Test

This section presents the level of performance of the Grade 1 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 1 Learners in Mathematics Based on Achievement Test
N=35

Level of Performance	**F**	**P**
Very Satisfactorily	15	42.86%
Satisfactorily	9	25.71%
Fair	6	17.14%
Poor	5	14.29%
Total	**35**	**100%**

Table 3 presents the level of performance of the Grade 1 learners in Mathematics based on the analysis of the achievement test. It is must be noted that majority of the Grade 1 learners got a "Fair" level of performance, 6 or 17.14 percent. This means that the Grade 1 learners level of performance should be improve and to learn Mathematical skills.

Problems Being Met by the Grade 1 Mathematics Teachers in the Implementation of Mathematics Program

This section presents the problem being met by the Grade 1 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	3.20	MS
5. Lack of supervision by the School Administrators	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	4.20	S
3. Frequent absenteeism	3.50	S
4. Lack of motivation to understand Mathematics or a subject	3.50	S
5. Lack of participation in Mathematical abilities	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	4.20	S
4. Lack of supervision to the children	4.20	S
5. Lack of time to attend meetings in mathematical.	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 1 Mathematics teaching in Dagupan City. 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 1 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 1 Mathematics Teachers

This section presents the output of the study which is a proposed intervention measures to address the needs identified by the Grade 1 Mathematics teachers in Dagupan City 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 1 Mathematics teachers in Dagupan City. This was focused on teacher-pupil and parents related problems.

Proposed Intervention Measures to Address the Needs Identified By the Grade 1 Mathematics Teachers

Areas of Concerns	Intervention Measures
A. Teacher-Related Problems	A. Tap civic spirited citizens to donate books in Mathematics. - Reorientation of Grade 1 Mathematics Teachers - Solicitation to finance Mathematics activities.
B. Pupil-Related Problems	B. Motivate the Grade 1 learners to study the needed Mathematical concepts and to love Mathematics as subject in the curriculum. - The Grade 1 Mathematics pupils should be encouraged to participate in the various Mathematics activities. - The Grade 1 learners should be advised properly regarding absenteeism.
C. Parent-Related Problems	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.

CHAPTER 4
SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

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 1 Mathematics Teachers in Dagupan City. The assessment included the professional profile of Mathematics teachers 2 in Dagupan City 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 1 learners in Mathematics and the problems being met by the Grade 1 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 Grade 1 Mathematics Teachers in Dagupan City. The 35 Grade 1 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 1 Mathematics Teachers in Dagupan City.

1.1 Majority of the Grade 1 Mathematics are BEED MA academic requirements.

1.2 Along the number of years teaching Mathematics, the Grade 1 Mathematics teachers belonged to 3-5 years of teaching 16 or 53.33 percent.

1.3 In terms of the in-service trainings attended, the Grade 1 Mathematics teachers attended various in-service trainings.

2.0 Level of performance of the Grade 1 Learners in Mathematics.

2.1 Majority of the Grade 1 learners belonged to “Fair” level of performance 6 or 17.14 percent.

3.0 Problems being met by the Grade 1 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 1 Mathematics Teachers

4.1 The proposed intervention measures can address the needs identified by the Grade 1 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 1 learners can still be improved.
3. Problems being met by the Grade 1 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 1 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.

B I B L I O G R A P H Y

A. BOOKS

Bago, Adelaida. Curriculum Development. The Philippine Experience. Manila De La Salle University Press, 2011.

California Department of Education. Mathematics Framework for California Public Schools. Kindergarten Through Grade Twelve, 2010.

Grolier, New Webster's Dictionary. U.S.A. Grolier Incorporated, 2012.

Ornstein, Allan C. Strategies for Effective Teaching. New York: Harper Collins Publishers, 2012.

Sobel, Max A. and E.M., Maletsky. Teaching Mathematics: A Sourcebook of Aids, Activities and Strategies. New Jersey: Prentice Hall, 2015.

Sta. Maria E. M. Modern Mathematics for Filipinos. Manila, Saint Mary's Publishing, 1996.

Ulit, Enriqueta V. Teaching the Elementary Schools Subjects. Manila: Rex Bookstore, 2015.

B. PUBLISHED MATERIALS

Angel, Carita S. "Learning and Teaching Mathematics in the Elementary". The Modern Teacher. Vol. XIX No. 9, February, 2011.

DepEd. "The Restructured Basic Education Curriculum Primer". Manila, 2012.

Department of Science and Technology, 2011.

Doblon, Amancio V. Welcome BEC!". The Education Post. Vol. XX No. 1 July, 2012.

Laroya, Jimmy A. "An Analysis of the Mathematics Competence of Grade 6 Teachers: Basis for a Proposed Training Program". M.A. Thesis, Luzon Colleges, Dagupan City, 2016.

Madriaga, Filipinas R. "Performance of Pupils in Solving Word Problems in Mathematics 2 in District IV, Olongapo City: Implications to Mathematics Instruction" Unpublished Master's Thesis, University of the East, 2012.

Ngagan, Julie A. "Teaching Elementary Mathematics in Grade 1 in the Western District of Mountain Province". M.A. Thesis, Baguio Central University, Baguio City, 2015.

San Jose, Angelita. "Performance of Grade 5 Pupils in Mathematics in the District of Orion: A Comparative Analysis". Unpublished Master's Thesis, St. Anthony College of Technology, 2015.

Sausa, Esther F. "Mathematics Teaching Problems of Elementary Teachers in Central Luzon Conference and South Central Luzon Mission". M.A. Thesis, Philippine Union College, Cavite, 2016.

Appendix A

Lyceum-Northwestern University
Institute of Graduate and Professional Studies
Dagupan City

The Schools Division Superintendent
Schools Division Office Dagupan City
Dagupan City, Pangasinan

Madam/Sir,

The undersigned is presently conducting a research work entitled "**The Implementation of Grade 1 Mathematics Program In Dagupan City**" at the Lyceum-Northwestern University, in partial fulfillment of the requirements for the degree Master of Arts in Education this academic year 2023-2024.

In line with this, the researcher would like to ask permission from your good office to allow her to float the questionnaire to the identified respondents.

Thank you very much and anticipating your favorable action.

Very truly yours,
Sgd. CHERRY V. DELA CRUZ
Researcher

Noted:

Sgd. CHRISTOPHER A. DE VERA, Ed.D.
Thesis Adviser

Approved:

ROWENA C. BANZON, Ed. D., CESO V
Schools Division Superintendent

Questionnaire for Grade 1
Mathematics Teacher In
Dagupan City

Dear Respondents,

The undersigned is presently enrolled at the Lyceum-Northwestern University, Graduate School and conducting a research work entitled "**Implementation of Mathematics Program for Grade 1 in Dagupan City".**

In line with my research, attached herewith is my questionnaire as my data gathering instrument. Kindly help the researcher by way of filling up the necessary data through this questionnaire.

Thank you very much and rest assure that your responses will be kept confidential.

Very truly yours,
Sgd. CHERRY V. DELA CRUZ
Researcher

Part I-Professional Profile of Grade 1 Mathematics Teachers In Dagupan City

Directions: Kindly put check (/) mark on the space provided for each item.

A. Highest Educational Attainment

_____BSEED
_____BSEED with MA units
_____BSEED MA academic requirements
_____Master of Arts in Education
_____Others (pls. specify)

B. Number of Years as Mathematics Teachers

_____0 to 3 years
_____4 to 5 years
_____7 to 10 years
_____Other (pls. specify)

C. Relevant in-service trainings attended in Mathematics

_____National Level
_____Regional Level
_____Division Level
_____District Level

Part II-Problems Being Met by the Grade 1 Mathematics Teachers in the Implementation of Mathematics Program

Directions: Kindly put a check mark (/) on the space provided for each column using the statistical range below in terms of the degree of seriousness.

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)

A. **Along Teacher-Related Problems**	**VS 5**	**S 4**	**MS 3**	**SS 2**	**NAP 1**
1. Lack of Basic Textbooks 2. Lack of Teacher's Guide 3. Lack of ability to respond Mathematical Knowledge 4. Lack of Budget to finance Mathematics activities 5. Lack of supervision by the School Administrators 6. Others (pls. specify)					
B**. Along Pupil-Related Problems**					
1. Lack of interest to study Mathematical concepts 2. Lack of ability in problem-solving 3. Frequent absenteeism 4. Lack of motivation to understand Mathematics as a subject 5. Lack of participation in Mathematical activities 6. Others (pls. specify)					
C. **Along Parent-Related Problems**					
1. Lack of knowledge about Mathematics Program 2. Lack of interest to participate in different Mathematical activities 3. Lukewarm attitudes of parents in Mathematics 4. Lack of supervision to their children 5. Lack of attendance in PTA meetings.					