



Supplementary Activity Worksheets in Mathematics 1 of Bangar District

Remedios M. Acosta

Graduate School, Ilocos Sur Polytechnic State College, Tagudin Campus, Tagudin Ilocos Sur, Philippines

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ABSTRACT

This study developed a Supplementary Activity Worksheets for Mathematics 1 Learners of the Elementary Schools of Bangar District, Bangar La Union after assessing the Mathematics performance of Grade 1 Learners. Specifically, it looked into the: Mathematics performance of Grade 1 learners during the first and second quarterly examinations as to their performance and written works, level of adequacy of instructional materials in Mathematics 1, extent of utilization of approaches and strategies in Mathematics 1, instructional material that can be proposed to improve the level of performance of learners in Mathematics 1 and the level of validity of the proposed Supplementary Activity Worksheets. The respondents were 572 Grade 1 learners of the 16 schools of Bangar district represented by a sample size of 245. The descriptive method of investigation was used in this study. A questionnaire checklist was utilized to gather the needed personal information about the respondents while the result of the Written works and Performance task for the first quarter and second quarter to assess the Mathematics performance of Grade 1 Learners. A questionnaire was also used to determine the adequacy of learning materials and utilization of the different approaches and strategies used by the 27 Grade 1 teachers of Bangar District. Frequency, mean, rank order and percentage were the statistical used. On the level of academic performance during the first quarter Written Works has mean value of 34.61 percent described as Satisfactory while performance tasks has a mean value of 18.98 also described as Satisfactory. The over-all mean is 53.59 which is described as satisfactory. During the second quarter, the level of academic performance on written works has a mean value of 37.60 described as very satisfactory while performance tasks has a mean value of 20.63 which also described as satisfactory. The over-all mean is 58.23 described as satisfactory. There was a slight improvement in the performance of the respondents so there is still a need to develop a more simplified learning material to enhance their mathematics performance. The level of adequacy of the learning materials in teaching Mathematics I is 3.37 described as moderately adequate. In terms of the extent of utilization of the different approaches and strategies in teaching Mathematics I, a mean rating of 3.95 described as Often Utilized (OU). The supplementary learning material was developed suited to the learning abilities of the learners. The developed Supplementary Activity Worksheets in Mathematics I is very highly valid (4.81) based on the assessment of the validators. Based on the salient findings, the researcher arrived at the following conclusions: the Grade 1 learners of the 16 elementary schools of Bangar District, Bangar, La Union have acquired the necessary mathematical competencies offered during the school year and that they are ready to be promoted to the next quarter or level; there is a dearth of instructional materials in mathematics for Grade I learners in the elementary schools of Bangar, District; the approaches and strategies in teaching Mathematics 1 are indispensable in the teaching and learning process in classroom instruction; a Supplementary Activity Worksheets in Mathematics 1 is an appropriate and effective way of upgrading the performance of Grade 1 learners; and the evaluated Supplementary Activity Worksheet is a very useful instructional aid by mathematics teachers. The following recommendations are highly offered: 1) The satisfactory performance of the learners in Mathematics 1 should be maintained and improved; 2) Parents should give more time and attention in monitoring the activities of their children; 3) Administrators and teachers may consider holding seminar-workshop on instructional material preparation to encourage teachers to devise their own instructional materials and to address the inadequacy of needed learning materials; 4) It is suggested that the use of appropriate teaching approaches and strategies should be maintained or even enhanced by the teachers concerned; 5) For future researchers, it is suggested that least mastered competency are to be used as a benchmark in the development of instructional materials and other supplementary learning devices; 6) The Supplementary Activity Worksheets for Mathematics 1 learners of the Elementary Schools in Bangar, La Union should be presented to the appropriate DepEd officials for perusal and approval to be used by Grade 1 learners not only in Bangar District but to other learning institutions as well; and 7) After 3 years, the Supplementary Activity Worksheets for Mathematics 1 learners should be reevaluated by other future researchers to maintain its reliability, validity, and effectiveness

Introduction

In the Philippines, elementary education aims at enabling the Filipino child to acquire the basic knowledge and skills, values, habits and attitudes essential to efficient, functional and intelligent citizen in a democratic society. It serves as a foundation in all levels of education and there has been interminable endeavors to improve the teaching learning process at this level. For years educators have searched for ways to more effectively teach Mathematics to all learners. Mathematics is a general education subject in the primary and higher education where learners are expected to gain understanding and appreciation of its principles as an applied-using appropriate technology in problem-solving, critical thinking, communicating, reasoning, making connections, representations, and decisions in real life (K to 12 Basic Education Curriculum). In the Philippine setting, educational modules in this order

contain a specific topic and instructional plan standards to empower understudies to create consistent and numerical abilities expected to get in the fundamental mathematical concepts. However, low performance in this discipline is still evident. People live in a mathematical world that whenever one decides on a purchase, choose an insurance or health plan, or use a spreadsheet, all these rely on mathematical understanding. The level of mathematical thinking and problem solving needed in the workplace has increased drastically. In such a world, those who can understand mathematical theory will have the opportunities to do Mathematics that others do not. Mathematical competence opens doors to productive futures but lack of mathematical competence closes those doors. Students have different abilities, needs and interests and yet everyone needs to be able to use Mathematics in his personal life, in the workplace, and in further studies. All students deserve opportunity to understand the power and beauty of Mathematics. Students need to learn a new set of basic Mathematics that enable them to compute fluently and to solve problems creatively and resourcefully.

It has a been long time to discover the importance of Mathematics in our world. And these discoveries led us to more technological or what is so called Industrial Era, wherein the different usage of technological devices occur. In this era, application of Mathematics helps to develop and invent such technological devices. Through these applications our life becomes easier. The declining quality of education in the country can be seen in the results of the Trends International Mathematics and Science Study (TIMSS) administered to Grade IV and Grade VIII learners in Mathematics and Science. Based on the 2003 result, the Philippines ranked 23rd among 25 countries in Mathematics for the 4th graders and 40th among 45 countries for the 8th-grade learners. Moreover, the Philippines ranked in the low 70s in the 2018 Programme for International Student Assessment (PISA), a student assessment of 15 – year – old learners across 79 countries done by the Organization for Economic Co-operation and Development (OECD).

As a Grade 1 teacher of Bangar District for ten years, it was observed that out of 18 there are only 2 or 3 learners who performed well in Mathematics and this was also experienced by colleagues teaching in Grade-1, as being shared by them during LAC Sessions or meetings. With this reality, it is not surprising why students performed poorly in Mathematics Achievement Test. Especially in this time of pandemic wherein teachers worked from home, learners were learning from home in an online format and parents picked up the modules and assisted their children in answering modules, performance task and written works. With this reality the performance of the learners deteriorated and we found that some of the learners got high grades in some written test because the parents are the one answering the questions. This is one reason why the Public Schools District Supervisor has made a program in the district called “Project MARIO” which means Mathematical Ability And Reading Intensification to be Outstanding to enhance the Mathematics and Reading ability of the Grade 1 learners and it is also supported by other reading program made in 16 schools of Bangar District. To evaluate the reading and numeracy skills of the learners school heads went to the different school to see the level of these learners. And if the learners passed in the said program then they will pass the subject and if not they will have their remedial or summer classes. Therefore, despite of the pandemic that we’re facing teachers made different strategies to reach their learners especially the struggling learners. We gave them walkie talkie, visited them in their home, encourage them to participate online classes and give additional modules in order for them to master the competency. In support with this Project MARIO the researcher conducted this study Supplementary Activity Worksheets in Mathematics 1 of Bangar District to give solutions to the problem.

Statement of the Problem

The main objective of this study was to develop a Strategic Worksheets in Grade 1 Mathematics for the first and second quarters. Specifically, it sought to answer the following questions: 1) What is the level of Mathematics performance of the Grade I learners during the first quarter and second quarter along: a. Written Works b. Performance Tasks 2) What is the level of adequacy of the learning materials in Mathematics 1 of the teacher-respondents? 3) What is the extent of utilization of the different approaches and strategies in teaching Mathematics I? 4) What supplementary materials can be developed to improve the Mathematics performance of the Grade 1 learners? 5) What is the acceptability of the supplementary activity worksheets?

Scope and Limitation of the Study

This study focused on the development of Supplementary Activity Worksheet for Mathematics 1 learners of Elementary Schools of Bangar District. The development of the Supplementary Activity Worksheet was based on the Mathematics performance of the Grade 1 learners during the first quarter and second quarter along: (a.) Written Works (b.) Performance Tasks, the level of adequacy of instructional materials, and the extent of utilization of different approaches and strategies of Mathematics 1. The study was composed of 245 respondents out of the 572 total number of Grade 1 learners enrolled during the school year 2020-2021 were used as respondents of this study.

Research Design

In the attempt of the researcher to gather information and data in an objective, complete and unbiased manner, this study used the descriptive - correlational research design. The respondents of this study composed of 2 groups: (1) the 245 Grade 1 learners from the total population of 542 Grade 1 learners enrolled during the school year 2020-2021 were considered in determining the level of performance in Mathematics based from their Written Works and Performance Tasks during the First and Second.

Results and Discussions

Supplementary Activity Worksheets in Mathematics 1 of Bangar District for School Year 2020-2021.

As seen in Table 1, 10 or 4.08 percent got 49-60 in written works were described as Outstanding, 74 or 30.20 percent got 37-48 scores which was described as Very Satisfactory, 151 or 61.64 percent got scores 25-36 are described as Satisfactory, 10 or 4.08 percent got 13-24 scores are described as Fairly Satisfactory. The written works during the first quarter shows mean rating of 34.61 percent which was described as Satisfactory. The findings show that the level of performance of Grade 1 learners in Mathematics is not impressive. Basically, the level of performance of the learners as manifested in the test results for the first quarter shows that the learners can satisfactorily deal with most of the problems, but not all. They can answer problems of average difficulty yet they find difficulty with complex problems because the competencies were not discussed by the teacher since face to face is not allowed during this pandemic. Some parents also cannot guide their children because they have to earn money to support the basic needs of their family.

Level of Academic Performance along Performance Tasks during the First Quarter

The Performance tasks for the first quarter has a mean rating of 18.98 percent which was described as Satisfactory. It is alarming to note that 14 or 5.71 percent did not meet expectation. The findings shows that some of the learners are not performing well in the subject as attested by the result. This is perhaps due to the fact that the learners are not fully motivated to learn the subject thus, Mathematics is difficult to them. This is perhaps attributed to the fact that the first three months of the school year, the learners are still interested in the lessons despite of this pandemic but have a difficulty in understanding the lessons because they study the lessons by themselves and they find the subject boring especially those learners who has working parents and have no enough time to assist them. And let us accept the fact that most of the learners cannot read and some don't know how to read numbers as well that's why they cannot solve such problems.

Summary on the Level of Academic Performance during the First Quarter

It can be gleaned from the above table that the mean rating of the Written Works is 34.61 percent which is described as satisfactory while the mean rating along Performance tasks is 18.98 described as Satisfactory also. The total mean is 53.59 which is described as satisfactory. This result implies that more motivation must be exerted on the part of the learners in order for them to love and enjoy the subject and the use of more captivating instructional materials must be considered on the part of the teachers.

Level of Academic Performance along Written Works during the Second Quarter

As can be gleaned from the above table that 51 or 20.82 percent got scores ranges 49-60 in the Written Works which is described as Outstanding, 60 or 24.49 percent got 37-48 scores described as Very Satisfactory, 122 or 49.80 percent got 25-36 described as Satisfactory, 7 or 2.86 percent got 13-24 scores described as Fairly Satisfactory, 5 or 2.04 percent got 0-12 scores described as Did Not Meet Expectation. The Written Works for the Second quarter has a mean of 37.60 which is described as Very Satisfactory. The finding shows a high result on the academic performance because there was a closer monitoring by the teachers to their learners and more adequate school facilities and equipment were utilized.

Academic Performance in Mathematics along Written Works and Performance Tasks during First and Second Quarters

A comparative study on the Academic Performance in Mathematics along Written Works and Performance Tasks during 1st and 2nd Quarters show a satisfactory result. Though it can be seen in the tables that there was a slight improvement in the performance of the respondents in terms of the results of the Written Works and Performance Tasks performances. This only proves a need to develop a more simplified learning materials that could enhance the satisfactory performance of the learners in Mathematics thus, a supplementary activity worksheet in Mathematics 1 was made.

Adequacy of Learning Materials in Teaching Mathematics 1

Teaching aids like Teaching Guides and Manuals has the highest rank described as highly adequate as indicated by the mean rating of 3.67; Prototype Outlines/Lesson Plans and Manipulative Objects has the rank of 2.5 described as highly adequate with the same mean rating of 3.58, while Textbooks/Reference Books has the fourth rank described as highly adequate by the mean rating of 3.54. Localized learner's Materials/Indigenized Instructional Materials has the fifth rank described as highly adequate by the mean rating of 3.46. Magazines, Pamphlets has the sixth rank described as highly adequate by the mean rating of 3.42. Two-dimensional materials and charts and graphs has the rank of 7.5 described as moderately adequate with the mean rating of 3.38. Three-dimensional instructional materials such as diorama, aquarium, globe, mock-ups, models, etc. has the ninth rank described as moderately adequate with the mean rating of 3.29. Educational videos and study guides has the rank of 10.5 described as moderately adequate with the mean rating of 3.25. Modules, skill books, workbooks has the twelfth rank described as moderately adequate with the mean rating of 3.17 while Computer-assisted Instructional Materials like interactive learning materials, e-learning materials etc. has thirteenth rank described as moderately adequate with the mean rating of 3.13. Supplementary Mathematics Books has the lowest rank which was indicated by the mean rating of 3.08 described as Moderately Adequate. The overall mean rating was 3.37 described as moderately adequate. This implies that the instructional materials of the elementary schools in Bangar District were more on lesson plans and manipulative objects and categorized as moderately adequate.

Utilization of the Different Approaches and Strategies

The indicator hands-on has the highest rank described as always utilized with the mean rating of 4.29. Collaborative learning has the second rank described as often utilized with the mean rating of 4.13. Modular instruction has the third rank described as often utilized with the mean rating of 4.08. Explicit Instruction, Discovery Method and Experiential Teaching has the fifth rank described as often utilized with the mean rating of 4.04. Inquiry-based Approach has the seventh rank described as often utilized with the mean rating of 4.00. Problem Solving and Lecture Method has the rank of 8.5 described as often utilized with the mean rating of 3.92. Deductive/Inductive and Use Visuals has the rank of 10.5 described as often utilized with the mean rating of 3.83. Brainstorming has the twelfth rank described as often utilized with the mean rating of 3.79. Teacher as guide and Differentiated Instruction has the rank of 13.5 described as often utilized with the mean rating of 3.71. Other approaches and strategies in teaching must also be utilized to further enhance the Mathematics performance of the Grade 1 learners. Obviously, the most common approaches and strategies used in the elementary schools of Bangar, La Union are hands-on, collaborative learning and modular instructions. It is also reflected that they often use Teacher as guide and differentiated instruction.

Conclusions and Recommendations

Based on the salient findings, the researcher arrived at the following conclusions: 1) The Grade 1 learners of the 16 elementary schools of Bangar District, Bangar, La Union have acquired the necessary mathematical competencies offered during the school year and that they are ready to be promoted to the next quarter or level; 2) There is a dearth of instructional materials in mathematics for Grade I learners in the elementary schools of Bangar, District; 3) The approaches and strategies in teaching Mathematics 1 are indispensable in the teaching and learning process in classroom instructions. 5) A Supplementary Activity Worksheets in Mathematics 1 is an appropriate and effective way of upgrading the performance of Grade 1 learners, and 6) The evaluated Supplementary Activity Worksheet is a very useful instructional aid by mathematics teachers. Based on the findings and conclusions made, the following recommendations are highly offered: 1) The satisfactory performance of the learners in Mathematics 1 should be maintained and improved; 2) Parents should give more time and attention in monitoring the activities of their children.

3.) Administrators and teachers may consider holding seminar-workshop on instructional material preparation to encourage teachers to devise their own instructional materials and to address the inadequacy of needed learning materials; 4.) It is suggested that the use of appropriate teaching approaches and strategies should be maintained or even enhanced by the teachers concerned; 5) For future researchers, it is suggested that least mastered competency are to be used as a benchmark in the development of instructional materials and other supplementary learning devices;

6) The Supplementary Activity Worksheets for Mathematics 1 learners of the Elementary Schools in Bangar, La Union should be presented to the appropriate DepEd officials for perusal and approval to be used by Grade 1 learners not only in Bangar District but to other learning institutions as well; and 7) After 3 years, the Supplementary Activity Worksheets for Mathematics 1 learners should be reevaluated by other future researchers to maintain its reliability, validity, and effectiveness.

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