"MAKING MATHEMATICS FLUENCY FEASIBLE THROUGH CONTINUOUS MATHEMATICS INTERVENTION FOR STRUGGLING GRADE 4 LEARNERS (MMFF COMING)"

KRISMYN L. VILLAPANDO
Teacher I
Southville 5A Elementary School

Teacher III
Southville 5A Elementary School

Teacher III
Southville 5A Elementary School

ABSTRACT

"Making Mathematics Fluency Feasible through Continuous Mathematics Intervention for Struggling Grade 4 Learners" is an action research designed to give intervention and instructional support for the school to help struggling Grade 4 learners to gain mastery of key mathematical concepts to lessen numeracy difficulties and enhance mathematics achievement. It will help and guide the school to create intervention and remediation programs and activities for Grade 4 struggling mathematics students.

Both quantitative and qualitative design was conducted in determining the result of Mathematics intervention for struggling Grade 4 learners. Participants of the study were from the list of struggling learners of Grade 4 with grades of 79 and below to be given by their respective Mathematics teachers. Monitoring of mathematics performance and observations tools for these learners should be well and honestly filled up by teachers. A purposive sampling is used to select the participants for this research.

The research was effective for the third and last quarter of School Year 2022-2023 of which students have been seen to improve performance evident in their score and participation in Mathematics subject. However, it can be concluded that this intervention program conducted should be used and modified for students in their next grade level for continuous development of one's Mathematics performances.

Keywords: *Fluency, Intervention, numeracy difficulties*

INTRODUCTION

Reinforcing mathematical key concepts mastery is essential for 21st century learners. Past reports stressed the need of having equipped with skills in mathematics education. One of these is the 2019 report of the Trends in International Mathematics and Science Study (TIMMS) of which our Grade 4 Filipino students lagged among the 58 countries involved in the study obtaining the lowest scores in mathematics and science. With this, the Department of Education (DepED) set a national initiative that aims to set in motion a collaborative action to promote better numeracy and mathematics achievement in schools and will be prioritizing with the improvement of literacy and numeracy programs.

Learners have faced different challenges in learning Mathematics due to COVID-19 pandemic of which face-to-face learning has been suspended and have the implementation of Modular Distance Learning as an immediate response to ensure learning continuity. With this, students experience difficulty engaging in concepts and for some students, the pandemic has resulted in learning losses and knowledge gaps particularly in mathematics. For the first two quarters of school year 2022 - 2023, there is a noticeable low performance of Mathematics periodical test results of Grade 4 students of Southville 5A Elementary School.

For the first quarter, Grade 4 MPS was 40% while in the second quarter a little increase with a MPS of 47%. Low performance of students in Mathematics have been seen. Different factors and reasons were accounted for and observed with students who are low performing in Mathematics, and these should be closely monitored and given intervention programs. For this reason, "Making Mathematics Fluency Feasible through Continuous Mathematics Intervention for Struggling Grade 4 Learners" action research should be done. This will not only help students cope up with their lessons in Mathematics but also be a tool to enhance one's mastery toward learning key concepts in Mathematics with these intervention and remediation programs.

METHODOLOGY

Data gathering will be through monitoring of mathematics performance and observations checklist of these learners to identify areas or topics that need intervention and remediation. Varied tests will be used as tool to assess learners' mastery of mathematical concepts and skills identified as basis of intervention and remediation. Feedbacking of assessed information should be listed down by the proponents and be reported to Mathematics teachers.

The procedure for data collection were summarized below:

1. **List down students with Second Quarter Grades of 79 and below in Mathematics**
   Meeting for the communication of the respondents in the research and for the areas of concern to be used or focused. Identification of the list of students included in the remediation or intervention.
2. **Observation and Monitoring**
   Gathering of data from observation and monitoring tools
3. **Collection of observation and monitoring tools '**
   Collection of gathered data
4. **Communication of areas identified for improvement.**
   Listing all areas identified for improvement.
5. **Preparation of tests**
   Crafting of intervention materials
6. **Giving of varied tests of intervention and remediation**
   Incorporating the use of different intervention materials
7. **Assessing and obtaining results of intervention and remediation**
   Gathering data from various tests
8. **Communication and feedback of results.**
   Crafting of the findings and recommendations of the study

RESULTS

The research highlighted the result and status of Mathematics MPS of Grade 4, current situation of learning Mathematics, the basis of intervention and remediation program of students in Mathematics and the efficacy of continuously incorporating intervention and remediation programs for struggling learners.

Question 1. What is the status of Mathematics first quarter and second quarter MPS of Grade 4?

Learners have faced different challenges in learning Mathematics due to the pandemic of which face-to-face learning has been suspended and classes were shifted into modular distance modality to ensure learning continuity. With this, students experience difficulties engaging in concepts and for some students, the pandemic has resulted in learning losses and knowledge gaps particularly in mathematics. For the first two quarters of school year 2022 - 2023, there is a noticeable low performance of Mathematics periodical test results of Grade 4 students of Southville 5A Elementary School.

2. What is the basis of intervention and remediation program of students in Mathematics?

With this low percentage of MPS for Grade 4 Mathematics, it has been seen that there are struggling students who are in need of Mathematics intervention. To assess this, the teacher was asked to list all struggling students, those of obtained a grade below 79. Factors affecting students' grades were taken into consideration. This includes written works, performance tasks and quarterly assessments. Teachers also knowing the status of his/her students in class, was able to identify students lacking numeracy skills needed in the subjects.

The following data was the list of struggling students needed intervention in Mathematics given by Grade 4 teachers. This

data was collected through result of students written works, performance task and quarterly assessment. Students identified obtained grades below 79 to be included in the list of students in need of intervention.

Students were closely monitored and observed by their teachers. Indicators showing they are struggling in Mathematics is low performance in schoolwork and activities, poor results in written works, quizzes and quarterly assessment, and behavior/attitude of students in answering or dealing with Mathematics activities. The underlying reasons for this was listed by teachers as basis for needed for improvement and intervention are also listed by teachers.

Question 3. What is the efficacy of continuous mathematics intervention and remediation program for struggling Grade 4 learners in Mathematics?

The effectiveness of continuous Mathematics intervention and remediation program was gaining of numeracy skills mastery. Students will develop a clear understanding of basic numeracy concepts that is very important in dealing with more complex mathematical topics. Mathematics performance of students will increase as they are more into learning mathematics. Intervention and remediation program helps teachers to support students learning and address learning gaps most especially in a classroom with varied learners.

DISCUSSION

Students most especially these past few years of dealing learning amidst the pandemic experience difficulties in engaging with concepts most especially in learning Mathematics evidently in the observed numeracy difficulties. Learning losses and knowledge gaps in Mathematics proved to be more challenging. Poor performance and low results of assessments were observed. Improving these and enhancing mathematics achievement, creation of intervention and remediation programs and activities was of best use to help these students. Taking students actively part of the intervention and designing activities was needed to ensure gaining mastery of key mathematical concepts to lessen numeracy difficulties and enhance mathematics achievement.
adapt and learn to accept the challenges of the pandemic.

Based on the analysis and findings of the study, the researchers concluded that "Making Mathematics Fluency Feasible through Continuous Mathematics Intervention for Struggling Grade 4 Learners" was effective for the last two quarters of School Year 2022-2023. Struggling students need to be more engaged in learning Mathematics and keep up with the skills needed in the subjects as it is taught with increasing complexity. Students are being given help with mathematics interventions through continuous practice of mathematical skills through different techniques such as using activity sheets, oral practice, written works, associated learning games and those efforts extended by the teacher themselves.

However, it can be concluded that this intervention conducted to help struggling learners in Mathematics should be used and modified for students in their next grade level for continuous development of one's performances and enhancement of one's skills and knowledge in learning Mathematics.

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