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STRENGTHENING NUMERACY SKILLS THROUGH INTERVENTION PROGRAM

RHOWENA A. MANALO
Teacher III
Mabini Central School
rhowena.manalo001@deped.gov.ph

ABSTRACT

This study devolves on strengthening numeracy skills of Grade Three learners through intervention program. The goal of this study was to help the 36 respondents, not only them but all Grade Three learners to become more numerate. Also, it focusses on providing pupils with additional support and instruction in the areas where they are struggling like four basic operations such as addition, subtraction, multiplication and division and problem solving skills. It will also aim to create a positive and supportive learning environment where pupils feel confident and comfortable taking risks.

Thirty-six (36) pupils are randomly selected to serve as the subjects of the study. Mixed methods of research through survey questionnaires and personal interviews among respondents were used and testified to supplement the needed data that will contribute to the validity of the study. Result revealed that from the data gathered that there is a remarkable impact in the academic performance using intervention program.

From the findings and conclusion, it was recommended that intervention program was very useful tool in achieving high numeracy skills of the pupils. It also emphasized the

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importance of strengthening the foundation of math concepts that is strengthening the basic number skills in order to solve various word problems.

Keywords: *strengthen, intervention, numeracy, activities*

Context and Rationale

Numeracy is the ability to understand and use numbers, shapes, and patterns in everyday life. It is an essential skill for success in school and in the workplace. It is a necessary ability for achievement in the classroom and at work. It is a skill that is required for success in both the workplace and the school. The development of a child's overall cognition and academic achievement depend heavily on their numeracy abilities. The third grade represents a turning point in a student's mathematical education throughout the early years of basic education. At this point, students should establish a solid numeracy foundation, which will serve as the framework for later-grade learning of more advanced mathematical ideas. However, when individual learning requirements and variances become more apparent, instructors frequently run into difficulties ensuring that all Grade Three children achieve competency in math.

The educational landscape today presents both opportunities and challenges. On the other hand, there is a rising understanding of the necessity of giving early education a high

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priority for numeracy skills. On the other hand, educators must face the fact that not all students perform at the level of expectation for their grade in Mathematics.

According to the Department of Education (DepEd), the Philippines has one of the lowest numeracy scores in the world. In the 2019 Programme for International Student Assessment (PISA), Filipino students ranked 76th out of 79 countries in Mathematics.

There are a number of factors that can contribute to students' numeracy difficulties. These include:

- Lack of exposure to numeracy concepts and activities in the early years.
- Difficulty with basic math operations such as addition, subtraction, multiplication, and division.
- Poor math anxiety or negative attitude towards Mathematics.
- Lack of support from teachers, parents, and other caregivers.

This action research aims to strengthen the numeracy skills of Grade Three learners through Math intervention program. The program will focus on providing students with additional support and instruction in the areas where they are struggling. It will also aim to create a positive and supportive learning environment where students feel confident and comfortable taking risks.

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The intervention program will be implemented over eight (8) weeks. This will be evaluated using a variety of methods, such as small-group tutoring, digital learning platforms or specialized self-learning modules. It also includes tests, observations, and pupils' surveys. It will be delivered in small groups of 6 pupils each in six sections. The program will be based on the following principles:

- Explicit instruction: Students will be given clear and concise instructions on the concepts and skills they are learning.
- Guided practice: Students will have opportunities to practice the skills they are learning with the support of the teacher.
- Independent practice: Students will have opportunities to practice the skills they are learning independently.
- Feedback: Students will receive timely and specific feedback on their work.
- Differentiation: The program will be differentiated to meet the needs of all learners.

Intervention programs have been identified as promising approach to boost pupils' numeracy abilities in order to address this issue. The program will be improved based on the evaluation's findings in order to be implemented in the future.

The intervention program is meant to assist pupils in developing stronger numeracy abilities and a more favorable attitude toward mathematics. Improvements in math and other academic performance will result from this.

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Literature Review

Mathematics skills, or numeracy, cover all facets of the subject, not just numbers. Being numerate entails being able to work with numbers and comprehend all mathematical concepts that assist with practical requirements in all facets of daily life (State of New South Wales (Department of Education), 2019). Numeracy fills the gap between the mathematical concepts we learn in school and the real-world applications of those concepts. One may argue that all of the mathematical encounters pupils have both within and outside of school contribute to their development of numeracy. Early mathematical achievement has a lasting impact on students. The foundation of understanding any mathematical operation in education is number.

According to National Numeracy (2019), there is substantial evidence that low numeracy skills are associated with poor outcomes in employment, wages, health, social, emotional and behavioural difficulties, and school exclusions in later secondary education. If students do not obtain numerate skills from the beginning of their schooling, it is known that they will struggle with harder maths in future years, as they cannot understand the*...show more content...*When teaching number sense there should be multiple posters and visuals around the classroom accessible for students at all times. Positive energy and constructive criticism so that students are not afraid to learn, whole class participation and group activities where all are involved, are more ways of developing better understandings. Teachers should have knowledge of what is being taught, of the teaching strategies, such as questioning, grouping, planning, assessing, and general factors that may impact the learning. Lastly, teachers need pedagogical content

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knowledge of the ways of representing and formulating the subject so that is it comprehensible to others, knowledge of what makes a specific topic easy or difficult to learn, and the preconceptions that students of different ages and backgrounds bring with them (State of Victoria, department of Education and Early Childhood development,

(Shaughnessy, 2019) reveals that numeracy focuses on the interpretative aspects of real-life data and generating ideas for activities that would better engage children in the complex and somewhat more demanding area of statistical literacy. Advancing a model of phases that suggest students go through from being able to draw a graph to being able to interpret a graph and make decisions. Findings shows from an authentic real-life context that has been investigated in order to examine the usefulness of the phases outlined in the model. Finally, examine possible strategies for classroom practice (Blagdanic & Chinnappan, 2019

Learning Teaching Scotland, 2019 further states that all schools, working with their partners, need to have strategies to ensure that all children and young people develop high levels of numeracy skills through their learning across the curriculum. These strategies will be built upon a shared understanding among staff of how children and young people progress in numeracy and of good learning and teaching in numeracy. Collaborative working with colleagues within their own early years setting, school, youth work setting or college and across sectors will support staff in identifying opportunities to develop and reinforce numeracy skills within their own teaching activities. The numeracy experiences

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and outcomes have been structured using eight organizers such as Estimation and rounding, Number and number processes, Fractions, decimal fractions and percentages, Money, Time, Measurement, Data and analysis and Ideas of chance and uncertainty. All of these areas of numeracy will be familiar and all teachers will recognize how they impact on their own lives. Reflecting on this will help teachers to identify where opportunities may exist to develop numeracy for children and young people.

Pupils who are really anxious about learning mathematics develop a dislike for the subject. In this situation, pupils' motivation to comprehend mathematics is typically poor. Why? According to Fatkul Anam et al 2020, it is a subject that is first became a required subject in the primary grades.Pupils in elementary school are doing well the potential to favor or detest mathematics. Using elementary school as the starting point for Investigating mathematics is crucial Several elementary school pupils struggle in grasping the math the teacher is teaching. Math is regarded as a challenging topic whenever they are given a math lesson, they get depressed.

Machera (2020), intervention as defined in the website achievement for all, is a selection of evidence-based teaching and learning processes to help students improve their learning. This entails choosing suitable interventions to assist a particular learner make purposeful changes in his or her learning. According to him interventions have benefits if administered properly, self-directing, cooperation and teamwork among students comprise some of the benefits. This is one of the many reasons why it is necessary to intervene. It will not only enable students to build their own emotional self, but it will also help them to know that their

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teachers are involved. This only proves that it is of significant relevance to select an effective and efficient mathematical intervention.

Additionally, (Matthew, 2019). cited that academic interventions address the academic problems of a student. Some of these implemented academic interventions in the Philippines were peer-tutoring/ assessment and self-assessment. Nevertheless, in spite of the efforts put by the teachers to implement interventions, students continued to exhibit downtrend performance in Mathematics. Thus, this paper aims to address this gap. Moreover, the study analyzes educators' various interventions to address the poor mathematical performance of students, as well as their efficiency in resolving learners' challenges in the development of basic mathematical abilities.

Innovation, Intervention and Strategy

The study reiterates the need for teachers to undertake several interventions to increase mathematical literacy skills of Grade three pupils who are having difficulty learning mathematics concepts.

For pupils, numeracy level will be enhanced by providing them with practice and timed activities that build fluency is essential. Opportunities to work through multi-step problems allow students to develop the higher-level thinking skills they need in order to progress to more complicated math concepts. Students need effective strategies and ample practice to increase their fluency in basic mathematics skills such as operational facts.

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The only way to truly increase fluency is to combine timed activities with additional practice opportunities (Raghubar, Barnes, & Hecht, 2019)

For teachers, the need to conduct interventions to help the child in their difficulties in Mathematics is necessary and the parents must support their children.at home. Likewise, parents may consult the progress of their child in school and teachers should also give feedback during Parent- teacher Conferences. According to Florida Department of Education (2019), when parents talk to their child's teacher, they don't need to worry about covering everything. Instead, keep the conversation focused on the most important topics for their child. In seventh grade, they may ask their child's teacher questions such as; a) How will my child be expected to show his/her work; b) What are some areas where my child is excelling; and c) Where does my child need extra help?

The information and insights that will be gained from this study may serve as guide for other researchers to conduct lateral studies.

Action Research Questions

Specifically, the researcher would like to answer the following questions.

1. What is the numeracy level of Grade Three learners ?
2. What difficulties are encountered by the pupils in acquiring high numeracy skills?
3. What intervention can be crafted to strengthen the pupils' numeracy skills?

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RESEARCH METHODOLOGY

This section presents the methods and procedures utilized in conducting the study. It tackles the research design, selection of participants of the study, data collection, data analysis and the instruments in the study.

a. Participants and source of data and information

There were 36 Grade Three pupils from Mabini Central School were chosen as the respondents of the study. who represented the 75% of the total number of pupils using Raosoft.

Distribution of Respondents

Grade Level/Section	Number of Respondents
Grade Three Pupils	
Sampaguita	6
Gumamela	6
Rosal	6
Ilang-Ilang	6
Adelfa	6
Santan	6
Total No. of Respondents	36

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b. Data gathering method

This study utilized the descriptive research design with 36 pupils as respondents. The main instrument for gathering needed data and information was the researcher's made questionnaire, survey and interview guide. The result of the researchers' made questionnaire was the basis of this research.

One hundred percent of the respondents answered the survey questionnaires which were then retrieved, analyzed, and recorded.

c. Data Analysis Plan

A four-point Likert scale was used to rate the numeracy level of 36 Grade Three pupils.To assess the level of the pupils' numeracy the following scale was used.

Option	**Scale Range**	**Verbal Interpretation**
4	3.50 - 4.00	High
3	2.50 – 3.49	Moderate
2	1.50 - 2.49	Low
1	1.00 – 1.49	None

For the difficulties they encountered and the effective intervention program to be used, the scale below was used.

Option	Scale Range	Verbal Interpretation
4	3.50 - 4.00	Strongly Agree
3	2.50 – 3.49	Agree
2	1.50 - 2.49	Disagree
1	1.00 – 1.49	Strongly Disagree

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The proponent used the simple percentage, weighted and average mean, and ranking in analyzing and validating the data gathered.

DISCUSSION OF RESULTS AND REFLECTION

Questionnaires were answered and submitted by the identified 36 respondents. Result of their responses had been recorded, tallied, and interpreted as follows:

Table 1

Pupils' Numeracy Level

Numeracy Level	Weighted Mean	Verbal Interpretation	Rank
Counting	3.75	High	1
Number Recognition	3.38	Moderate	2
Basic Operations (Addition)	2.33	Low	3
Basic Operations (Subtraction)	2.25	Low	4
Basic Operations (Multiplication)	2.11	Low	6
Basic Operations (Division)	2.16	Low	5
Problem Solving	2.08	Low	7
Composite Mean	2.58	Moderate	

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Table I shows the numeracy level of the pupils. It is shown that the pupils' numeracy level in counting is high with a weighted mean of 3.75 which means most of the pupils can do counting easily and ranked 1. Second to the rank is number recognition with a weighted mean of 3.38. All the basic operations such as addition, subtraction, multiplication and division had a verbal interpretation of low. Basic operations addition ranked 3 with a weighted mean of 2.33, followed by basic operation subtraction ranked 4 with a weighted must read proficiently and analyze the word problem carefully. Consequently, word problems can be challenging for pupils even if they often perform well in math. Children who struggle to understand mathematical expressions and concepts may struggle to recognize clues in word problems, even if they are great readers. mean 2.25. Next is basic operation division ranked 5 with a weighted mean of 2.16 ,then ranked 6 is basic operation multiplication and the last one is problem solving with a weighted mean of 2.08 ranked 7.It means that problem solving skills is the lowest in rank. To solve this, children Positive thoughts about word problems can help also to success.

So, this implied that the pupil's numeracy skills in primary learners can vary depending on the specific grade section and individual learners. Pupils in Grade 3, are required to gain basic numeracy abilities such counting, number recognition, comprehension of basic operations (addition, subtraction, multiplication, and division), and problem-solving abilities. However, keep in mind that each learner's degree of numeracy skills might vary, and that different and instructional strategies as well as support from parents and guardians may have an impact.

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Table 2

Difficulties Encountered by the Pupils in Acquiring High Numeracy Skills

Difficulties in Numeracy Skills	**Weighted Mean**	**Verbal Interpretation**	**Rank**
1.Had no mastery of the competencies in Mathematics	3.58	Strongly Agree	7
2. Having Concentration and attention difficulties	3.83	Strongly Agree	2.5
3.Lack of understanding of basic concepts	3.81	Strongly Agree	4
4. Lack of Practice	3.67	Strongly Agree	5
5. Unable to manage their time for learning	3.64	Strongly Agree	6
6. Lack of patience.	3.39	Agree	9
7. Having math anxiety	3.42	Agree	8
8. Lack of interest and motivation in learning mathematics	3.83	Strongly Agree	2.5
9. Use of inappropriate learning methods	3.31	Agree	10
10. Lack of support from parents and the surrounding environment	3.89	Strongly Agree	1
Composite Mean	3.64	Strongly Agree	

The table indicated the difficulties encountered of Grade Three learners in acquiring high numeracy skills. Lack of support from parents and the surrounding environment

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ranked 1st with weighted mean of 3.89. Because parents were too busy in household chores and their work and some have also difficulty in Mathematics as well as due to financial struggles, they can't support their child. Having concentration and attention difficulties and lack of interest and motivation in learning mathematics, both ranked 2.5 and weighted mean of 3.83.

On the other hand, lack of understanding of basic concepts ranked 4th, lack of practice which ranked 5th .A weighted mean of 3.64,unable to manage their time of learning ranked 6th .

However, had no mastery of the competencies in Mathematics ranked 7th and having Math anxiety ranked 8th . On the 9th rank, lack of patience got a weighted mean of 3.39 and lastly, use of inappropriate learning methods had a weighted mean of 3.31.

This implied that that pupils are not taking sufficient effort, not supporting by parents and they are unable to manage their time for learning. These factors are found relevant equally as difficulty in speedy grasping of the concepts and skills in Mathematics.

Table 3

I. Intervention that can be Crafted to Strengthen the Pupil's Numeracy Skills

Crafted Interventon	**Weighted Mean**	**Verbal Interpretation**	**Rank**
1. Provides practice exercises at home	3.88	Strongly Agree	**3**
2. Peer Tutoring/ One on One Tutoring	3.88	Strongly Agree	3

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3.Conference with parent and pupils	3.86	Strongly Agree	5.5
4. Use visuals and images	3.86	Strongly Agree	5.5
5.Ongoing,formative assessment	3.56	Strongly Agree	8.5
6. Using manipulatives and models	3.88	Strongly Agree	3
7. Redo Activities with low scores	3.92	Strongly Agree	1
8. Providing extensive feedback	3.56	Strongly Agree	8.5
9.Remedial class	3.42	Agree	10
10. Incorporate storytelling to make connections to real-world scenarios	3.67	Strongly Agree	7
Composite Mean	3.75	Strongly Agree	

The design of an efficient intervention program to enhance pupils' numeracy skills requires several strategies.. The following tactics could be used in such a program.The respondents showed strongly agree with overall weighted mean of 3.75 with regards to the intervention strategies to be done so they can cope up with the difficulties they encountered in Mathematics and to level up their numeracy skills.Noteworthy on the result was redo activities with low scores got a weighted mean of 3.92 which ranked 1.Ranked 2 with weighted mean of 3.88 are the following: provides practice exercises at home, peer tutoring/ one on one tutoring and using manipulatives and models.They also believed that with this strategy conference with parent and pupils by the teacher in informing the classroom status of the pupils and use visuals and images really help in crafting their numeracy skills.Both intervention strategies got weighted mean of 3.86 which ranked 5.5. Incorporate storytelling

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to make connections to real-world scenarios ranked 7 with weighted mean of 3.67 , ongoing,formative assessment and providing extensive feedback both ranked 8.5 with weighted mean of 3.56 and lastly having remedial class ranked 10 with weighted mean of 3.42.As I observed,pupils need to relax for a while that's why they put remedial classes lastly.

Based on the findings, it can be deduced that parents, teachers and pupils should work all together to strengthen pupils' numeracy skills. Knowledge should be well structured and connected to previous content to promote meaningful understanding and memory . Pupils should be instructed to follow deeper learning strategies so as to improve understanding and memorization . They should be given problems that connect in their everyday lives. Their self-efficacy, expectancy beliefs regarding mathematics to be finely tuned to increase their effort . Provide them clear the curricular goals and help them to set their own goals and make them confident that ability can be improved through effort and patience.

Conclusions

In conclusion, strengthening numeracy through intervention programs is a crucial and effective approach to enhancing mathematical proficiency among learners of all ages. These programs are designed to provide targeted support and resources to individuals who may be struggling with mathematical concepts or looking to improve their quantitative skills. The implementation of numeracy intervention programs has shown promising results in various educational settings, yielding numerous benefits such as improved academic performance,

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increased confidence in mathematical abilities, and a greater capacity to apply numeracy skills in real-life situations.

The success of these programs often hinges on a combination of factors, including tailored instructional methods, the use of concrete and practical examples, and ongoing assessment and feedback to track progress and adapt teaching strategies. Furthermore, intervention programs not only address individual learning needs but also contribute to closing the achievement gap by providing equitable opportunities for all students to develop strong numeracy skills.

However, it's essential to recognize that the effectiveness of numeracy intervention programs can vary depending on the quality of program design, teacher expertise, and the level of commitment from both educators and learners. To achieve the best outcomes, collaboration between teachers, administrators, and parents is crucial in supporting the development of numeracy skills.

In a world increasingly reliant on quantitative reasoning and problem-solving, numeracy intervention programs play a pivotal role in fostering mathematical competence and ensuring that individuals are better equipped to navigate the challenges of the 21st century. As such, investment in these programs, along with ongoing research to refine and optimize their methodologies, is an investment in the future success of students and the broader society.

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Recommendations

To effectively strengthen numeracy using intervention programs, I recommend the following strategies:

Individualized Learning Plans: Tailor intervention programs to the specific needs of each learner. Conduct assessments to identify their strengths and weaknesses, and then create personalized learning plans that focus on areas requiring improvement. This targeted approach ensures that interventions are relevant and beneficial for each student.

Highly Qualified Instructors: Employ instructors who are well-versed in numeracy instruction and intervention techniques. Teachers should possess a deep understanding of mathematical concepts, the ability to adapt teaching methods to individual learning styles, and the patience to provide ongoing support.

Practical and Real-World Applications: Incorporate practical, real-world examples into the curriculum to demonstrate the relevance of numeracy skills. This can motivate students and make the content more engaging and relatable.

Frequent Progress Monitoring: Implement a robust system for continuous progress monitoring. Regular assessments and feedback help track the effectiveness of the intervention and allow for adjustments as needed. Parents and caregivers should also be involved in this process to ensure consistency in support.

Small Group Instruction: Whenever possible, provide numeracy intervention in smaller groups or on a one-on-one basis. This allows for more personalized attention and targeted instruction, addressing individual needs more effectively.

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Use of Technology: Utilize educational technology and digital resources to enhance numeracy intervention programs. Interactive math software and online tools can engage students and offer additional practice opportunities.

Professional Development for Educators: Offer ongoing professional development opportunities for teachers involved in numeracy intervention programs. Training in the latest teaching methods and strategies can help instructors adapt to evolving educational needs.

Parental Involvement: Encourage and facilitate parental involvement in their child's numeracy education. Providing resources and guidance for parents to support their children's learning at home can reinforce the interventions provided at school.

Flexible Scheduling: Be flexible with scheduling to accommodate the unique needs of students. Some learners may require more time and support, while others may progress more rapidly. Flexibility in scheduling can help ensure that all students receive the necessary interventions.

Long-Term Commitment: Recognize that strengthening numeracy is a long-term endeavor. Intervention programs should not be viewed as quick fixes but as ongoing support mechanisms to help students build a solid foundation in numeracy.

By implementing these recommendations, educational institutions and policymakers can create effective numeracy intervention programs that empower students to develop strong mathematical skills, improve academic performance, and better prepare them for success in their academic and professional endeavors

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Plans for Dissemination and Utilization

Research Output	Scheme of Dissemination	Resources Needed
Action Research Plan of activities/strategy to strengthen pupil's numeracy skills	SLAC session Parents' assembly and quarterly meeting with parents Presentation at Division Research Compendium	DLP Video Pictures

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Research Report

Summary

This research entitled **"Strengthening Numeracy Skills Through Intervention Program"** was made by **RHOWENA A. MANALO,** aimed to determine the pupils' numeracy level in Mathematics. It can be reflected on the research that there are difficulties that pupils encountered in acquiring high numeracy skills. It utilized qualitative descriptive approach to solve a classroom-based problem where frequency, mean and percentage were used to interpret and validate gathered data from the survey-questionnaire. Thirty-six learners are respondents and were used to study.

This study found out that learners had struggling in four basic operations and problem solving. It will then be the basis to create a positive and supportive learning environment where learners feel confident and comfortable and have more favorable attitude toward Mathematics. It was recommended that intervention program was very useful tool in achieving high numeracy skills of the pupils. It also emphasized the importance of strengthening the foundation of math concepts that is strengthening the basic number skills in order to solve various word problems.

Introduction

The educational landscape today presents both opportunities and challenges. On the other hand, there is a rising understanding of the necessity of giving early education a high

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priority for numeracy skills. On the other hand, educators must face the fact that not all students perform at the level of expectation for their grade in Mathematics.

The intervention program will be implemented over eight (8) weeks. This will be evaluated using a variety of methods, such as small-group tutoring, digital learning platforms or specialized self-learning modules. It also includes tests,observations, and pupils' surveys. It will be delivered in small groups of 6 pupils each in six sections.. They have been identified as promising approach to boost pupils' numeracy abilities in order to address this issue. The program will be improved based on the evaluation's findings in order to be implemented in the future.

Additionally, they are meant to assist pupils in developing stronger numeracy abilities and a more favorable attitude toward mathematics. Improvements in math and other academic performance will result from this.

Methods

The research was conducted by questionnaire using Likert scale to assess the numeracy level of Grade three pupils and their difficulties encountered in Mathematics. A total of 36 Grade Three pupils were chosen as respondents who represented 75% of the total number of learners using Raosoft.

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Results

Based on the results of the study, the respondents of the study have low numeracy level in four basic operationsand have difficulties in solving different numeracy skills and this implied that guidance of parents and intervention made by teacher are necessary to strengthen their numeracy skills.

Conclusion

It's essential to know and understand that the degree of program design quality, teacher skill, and student and educator dedication can all affect how effective numeracy intervention programs are. In order to assist the development of numeracy skills and get the best results, coordination between educators, administrators, and parents is vital. In a society where quantitative reasoning and problem-solving are becoming more and more important, numeracy intervention programs are essential for developing mathematical competence and making sure that people are better prepared to face the challenges of the twenty-first century. Consequently, funding these programs and continuing research to improve and streamline their techniques is an investment in the future prosperity of both students and society at large.

Recommendations

It is recommended that through intervention programs learners' numeracy skill will be enhance by the following strategies:

- **Individualized learning plans**

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- **Practical Real world applications**
- **Frequent progress monitoring**
- **Small group instructions**
- **Use of technology**

Finally intervention programs should be applied not just in Mathematics but in all subject areas.

Prepared by:

RHOWENA A. MANALO

Researcher

Approved:

GILMA C. PORLEY
Principal III

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Output of the Research

Based on the result of the study intervention program or activities is an effective way to strengthen numeracy skills of the Grade Three learners. These program are desighned to provide targeted support and resources to improve their numeracy skills. It has shown promising results in various educational settings, yielding numerous benefits such as improved academic performance, increased confidence in mathematical abilities, and a greater capacity to apply numeracy skills in real-life situations.

The success of these programs often hinges on a combination of factors, including tailored instructional methods, the use of concrete and practical examples, and ongoing assessment and feedback to track progress and adapt teaching strategies. Furthermore, intervention programs not only address individual learning needs but also contribute to closing the achievement gap by providing equitable opportunities for all students to develop strong numeracy skills.

The effectiveness of Intervention Program at Mabini Central School can vary depending on the quality of program design, teacher expertise, and the level of commitment from both educators and learners. To achieve the best outcomes, collaboration between teachers, administrators, and parents is crucial in supporting the development of numeracy skills.In order to adapt the proposed research made an action plan of activities / strategies to strengthening numeracy skills of Grade Three pupils of Mabini Central School through intervention program.

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ACTION RESEARCH OF ACTIVITIES/STRATEGIES TO STRENGTHENING NUMERACY

SKILLS THROUGH INTERVENTION PROGRAM

Indicators	Timeline	Activities	Strategies
1.Assessment and Identification	Year Round	Pre Test,Quarterly	Explicit instruction,Guided and Independent Practice
2.Setting Goals	Year Round	Plan the implementation	Hands –on Activities
3.Instructional Strategies	Year Round	INSET,SLAC	Interventions Used in Math,Technology Integration
4.Support and Resources	Year Round	Provide additional support from parents	Information Dissemination
5.Monitoring and Feedback	Quarterly	HPTA Meetings	Collaboration
6.Professional Development	Mid Year Break	INSET/SLAC	Interventions Used in Math,
7.Evaluation and Reflection	Year Round	Having feedback	Monitor progress

Prepared by:

RHOWENA A. MANALO
Researcher

Approved:

GILMA C. PORLEY
Principal III

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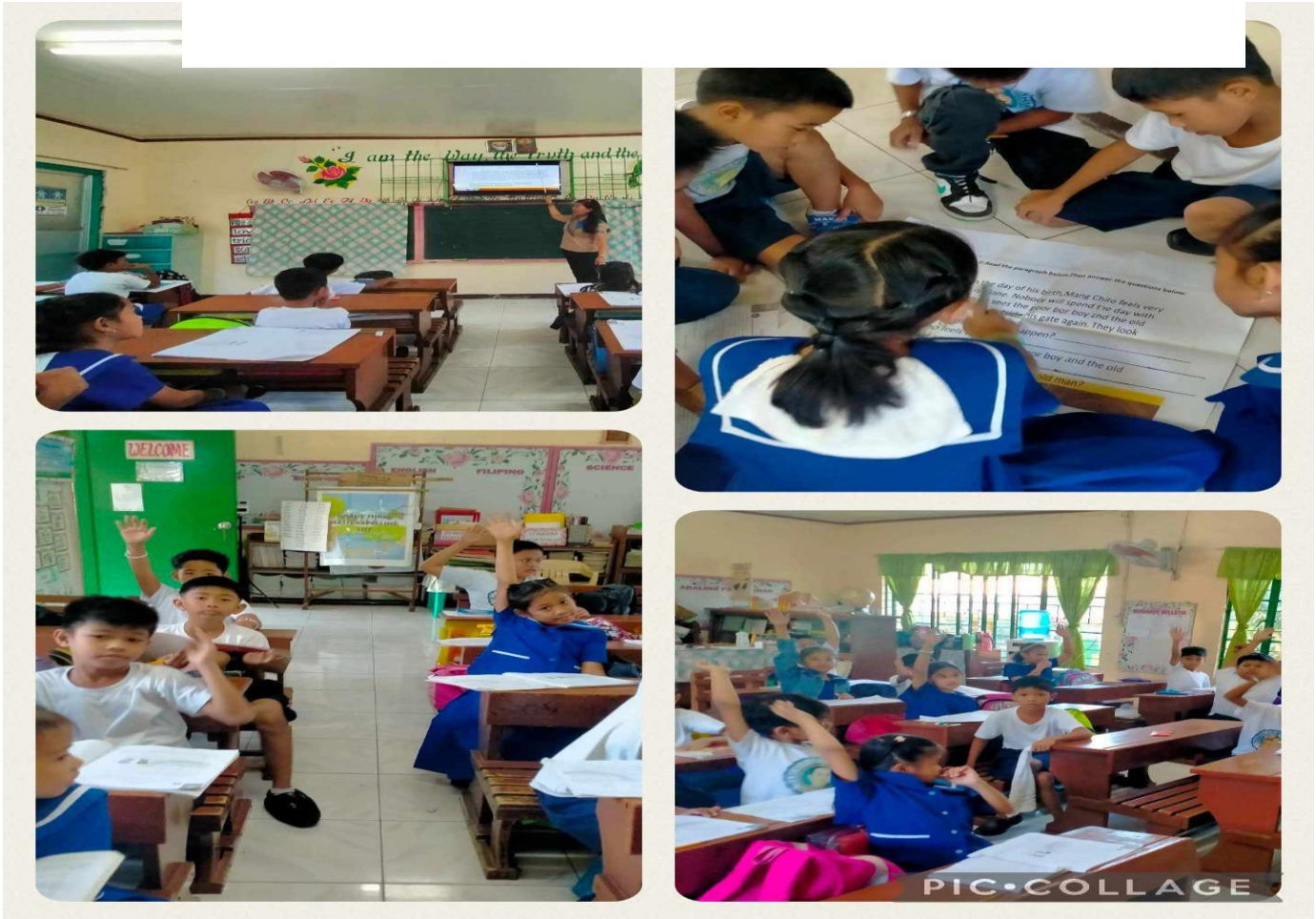
The following video or link were used to enhance the numeracy skills of Grade Three learners

- **https://www.youtube.com/watch?v=BoxvayyRNfU**
- **https://www.youtube.com/watch?v=ek1JJVYaXxU**
- **https://www.youtube.com/watch?v=3zXXFwHqlhg**
- **https://www.youtube.com/watch?v=0i2hOJBlgGE**



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September 20,2023

GILMA C. PORLEY
Principal
Mabini Central School
Mabini, Batangas

Madam:

May the blessings of the Lord be with you!

I am deeply honored to select our school as my locale in realizing my action research entitled **"Strengthening Numeracy Skills through Intervention Program".**
As teacher, I am humbly seeking permission from your office to conduct study in our school and disseminate the questionnaires to the teachers.

Rest assured that the data to be gathered will be treated with utmost confidentiality. Your approval will be highly appreciated.

Thank you for your consideration. Mabuhay!

Very truly yours,

RHOWENA A. MANALO
Researcher

Approved:

GILMA C. PORLEY
Principal III

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September 15,2023

GILMA C. PORLEY
Principal
Mabini Central School
Mabini, Batangas

Madam:

May the blessings of the Lord be with you!

I am deeply honored to select your school as my locale in realizing my action research entitled **" Strengthening Numeracy Skills Through Math Intervention Program".**
As teachers, We are humbly seeking permission from your office to conduct study in our school and disseminate the questionnaires to the teachers.

Rest assured that the data to be gathered will be treated with utmost confidentiality. Your approval will be highly appreciated.

Thank you for your consideration. Mabuhay!

Very truly yours,

RHOWENA A. MANALO
Researcher

Approved:

GILMA C. PORLEY
Principal III

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Research Report

This research entitled **"Strengthening Numeracy Skills through Math Intervention Program"**was made by **RHOWENA A. MANALO and JONALYN B. ATIENZA,** aim to determine the common problems or challenges affecting the implementation of blended learning approach. It can be reflected on the research that there are challenges that teachers and pupils encountered in in the implementation of blended learning modality in the present setting of educational system. Based on the results of the study, the teachers who served as the respondents of the study believed that still there's a need of training in the use of different digital platforms and teachers should always put the pupils at the center of learning. The results also revealed that there are problems encountered in the implementation of modular distance learning modality which made the teachers do their part to help their children in answering the modules and always remind the pupils the health and safety protocols.The developed plan of activities based on the variables in the study could be applied to further improve the implementation of blended learning which lead to the improvement in the understanding and performance of pupils in different learning areas.

Very truly yours,

RHOWENA A. MANALO
Researcher

JONALYN B. ATIENZA
Researcher

Approved:

GILMA C. PORLEY
Principal III

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Output of the Research

Plan of Activities to Enhance the Implementation of Blended Learning Approach

1. Put pupils at the center of the learning

2. Boost pupils interactivity

3. Teachers should adapt the technology to the needs and have more trainings about digital platforms

4. Solicit feedback from the learners and parents. Encourage them to share their opinions, suggestions, and concerns to give feedbacks.

5. Use a good blend of online and offline resources and in persons of learning.With this blended learning ,you can provide a seamless learning experience to the learners.

Very truly yours,

RHOWENA A. MANALO
Researcher

JONALYN B. ATIENZA
Researcher

Approved:

GILMA C. PORLEY
Principal III

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C. Legal Documents

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QUESTIONNAIRE

Part I Profile Respondents

Directions: This part aims to determine the profile of respondents

Name:_____ (Optional)

a. Sex
   - Male
   - Female

b. Position
   - Teacher I-III
   - Master Teacher

c. Length of Service
   - 4 years and below
   - 5-10 years
   - 11-20 years
   - More than 20 years

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Part II Blended Learning Activities

Directions: This part aims to determine the blended learning activities being delivered to pupils.. Use the options below to indicate your response. Put a check (✓) under the number column to determine the level of parents involvement in modular distance learning.

Options	Scale Range	Verbal Interpretation
4	3.50 – 4.00	Strongly Agree
3	2.50 – 3.49	Agree
2	1.50 – 2.49	Disagree
1	1.00 – 1.49	Strongly Disagree

Items	4 Strongly Agree	3 Agree	2 Disagree	1 Strongly Disagree
1.Engage in social activities				
2.Create a journal or portfolio				
3.Discuss/ share their opinions in pairs or groups following health protocols				
4.Prepare a visual depiction of a story related to the concepts				

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5.Use graphic organizers to illustrate				
6.Create a concept map in class				
7.Play basic games				
8.Can define a problem and solve it within a specific period of time				

II. Common Problems Encountered in Blended Learning

Common Problems Encountered in Blended Learning

Modular Learning Modality

Items	**4 SA**	**3 A**	**2 D**	**1 SD**
1. Inability to submit on time				
2. Difficulty in reading and comprehension				
3. Inability of parents to assist in the modules.				
4. Game addiction among pupils				
5. lack of focus of pupils				
6. Submission of incomplete answers in a particular modules				
7. Difficulty in validating students' performance				
8.Time consuming in preparing self learning materials				

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9.Lack of printing materials/scarcity of supplies				
10.Insufficient time and assistance in printing the modules				

Common Problems Encountered in Blended Learning

Online Learning Modality

Items	**4 SA**	**3 A**	**2 D**	**1 SD**
1.poor internet connection				
2. Lack of gadgets to be used and no load				
3. Inability to communicate with friends				
4.Failure to focus on screen				
5.Sense of isolation				
6.Difficulty in doing powerpoint presentation				
7. Lack of in person interaction				
8.Ineffective time management				
9.Technology issues				
10.Lack of basic understanding using digital forms of learning				

Common Problems Encountered in Blended Learning

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Limited Face to Face Learning

Items	4 SA	3 A	2 D	1 SD
1. Pupils' lack of preparedness for face to face learning				
2.Limited time to accommodate learners' concerns and limited teaching and learning resources				
3. Pupils are hardly adjusting to the standards health protocols				
4. Pupils tend to interact and play with their classmates				
5.Three to five hour class is not sufficient for pupils to finish their activities				
6. Pupils cannot clearly see what written on the board due to physical distancing"				
7.Pupils cannot clearly hear what the teacher is saying because of face masks				
8.Pupils difficulty in basic literacy				

4.Benefits Gained from Using Blended Learning Modality

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Benefits Gained from Using Blended Learning Modality

1. Provide a safer learning environment.				
2. Increases pupils'engagement.				
3. Flipping the classroom mproves comprehension. .				
4. Efficient use of instructor time				
5. Pupils have more autonomy over their learning.				
6. Teachers can visualize and track each student's progress				
7.Enhanced communication and retention				
8. Learners get a personal experience				
9. It's easier for teachers to see how learners are doing				

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August 4,2022

GILMA C. PORLEY
Principal
Mabini Central School
Mabini, Batangas

Madam:

May the blessings of the Lord be with you!

I am deeply honored to select your school as my locale in realizing my action research entitled **" Blended Learning Experiences: Basis for Teachers'Enhancement Development Program"**
As a teacher, I am humbly seeking permission from your office to conduct study in our school and disseminate the questionnaires to the teachers.

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Principal III

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