International Journal of Trend in Scientific Research and Development (IJTSRD)
Volume 10 Issue 5, Sep-Oct 2026 Available Online: www.ijtsrd.com e-ISSN: 2456 – 6470

Underscoring the Adoptive Intervention Strategies in Teaching Learning Numeracy Skills among Learner

Daisyville T. Palomares, Rufino T. Tudlasan, Jr. Ph.D.

Cebu Technological University - Main Campus, Cebu, Philippines

ABSTRACT

This research aimed to determine the relationship between the extent of teacher intervention strategies and the level of numeracy skills among Grade 5 learners of Sto. Niño Dela Paz Elementary School, Loon South District, Division of Bohol during the School Year 2026–2027, as a basis for developing Enrichment Exercises. Using a descriptive-correlational design, the study gathered data covering the respondents' profiles, the extent of behavioral, cognitive, and affective teacher intervention strategies, the learners' numeracy skills across number sense, basic operations, fractions and decimals, and problem-solving, as well as the instructional issues and concerns encountered by educators. Frequency, percentage, weighted mean, standard deviation, and Pearson Product-Moment Correlation Coefficient (r) were used to analyze the data. Results showed that while teachers utilized intervention strategies to a high extent—with affective methods ranking the highest—the overall numeracy performance of the learners fell within the Not Proficient classification, heavily bottlenecked by non-proficiency in fractions, decimals, and problem-solving. A non-significant relationship was found between teacher intervention strategies and learner numeracy skills, confirming that current intervention routines operate independently of student performance due to severe structural constraints such as inadequate lesson time and material-preparation difficulties. Based on these findings, a structured Enrichment Exercises was developed to systematically shift remediation toward data-driven, diagnostic frameworks and targeted scheduling blocks suited for Grade 5 learners.

KEYWORDS: *MAEd major in administration and supervision, descriptive-correlational design, teacher intervention strategies, numeracy skills, behavioral and cognitive strategies, mathematical proficiency, enrichment exercises, Bohol, Philippines.*

How to cite this paper: Daisyville T. Palomares | Rufino T. Tudlasan, Jr. "Underscoring the Adoptive Intervention Strategies in Teaching Learning Numeracy Skills among Learner" Published in International Journal of Trend in Scientific Research and Development (ijtsrd), ISSN: 2456-6470, Volume-10 | Issue-5, October 2026, pp.996-1035, URL: www.ijtsrd.com/papers/ijtsrd142175.pdf

IJTSRD142175

Copyright © 2026 by author (s) and International Journal of Trend in Scientific Research and Development Journal. This is an Open Access article distributed under the terms of the Creative Commons Attribution License (CC BY 4.0) (http://creativecommons.org/licenses/by/4.0)

1. THE PROBLEM AND ITS SCOPE

INTRODUCTION

Rationale of the study

Numeracy is a fundamental skill that enables learners to understand, apply, and communicate mathematical concepts in everyday life. It serves as a critical foundation for academic success, problem-solving, decision-making, and lifelong learning. In the elementary years, the development of numeracy skills is particularly important because it influenced learners' ability to engage with more complex mathematical concepts in higher grade levels. As such, schools continuously seek effective strategies to strengthen learners' mathematical competencies and address learning gaps that hinder academic achievement.

In recent years, concerned regarding learners' numeracy performance have become increasingly evident in many educational systems worldwide. Learning disruptions caused by the COVID-19 pandemic, prolonged school closures, and the shift to alternative learning modalities have significantly affected learners' acquisition of foundational mathematical skills. Consequently, many learners have demonstrated difficulties in number sense,

computation, problem-solving, and mathematical reasoning. These challenges highlight the need for targeted interventions that can effectively address learners' specific numeracy deficiencies and support their academic recovery.

Within the Philippine educational context, improving numeracy remains one of the priorities of the Department of Education (DepEd). Various assessments have revealed that many elementary learners continue to perform below expected proficiency levels in Mathematics. The gaps in foundational numeracy skills have prompted schools and teachers to implement intervention programs aimed at improving learners' mathematical understanding and performance. Teacher-led interventions have become essential mechanisms for identifying learning gaps, providing remediation, and facilitating individualized instruction that addresses learners' unique needs.

Recent studies have demonstrated the effectiveness of intervention programs in enhancing learners' numeracy skills. Portillo, Consigna, and Burgos (2026) found that a Rapid Mathathematics Assessment (RMA)-Based Intervention Program significantly improved the numeracy performance of Grade 5 learners, particularly in fractions, decimals, and problem-solving skills. The study emphasized the importance of assessment-based intervention, differentiated instruction, and continuous monitoring in addressing mathematical learning gaps among elementary learners.

Similarly, Gonzales (2024) reported that Project Math-GALING, a numeracy intervention program implemented among elementary learners, effectively enhanced learners' mastery of the four fundamental mathematical operations. The intervention provided structured learning activities that helped learners bridge their numeracy gaps and improve their mathematical performance. The findings highlighted the significant role of teacher-designed intervention programs in promoting numeracy development among struggling learners.

Furthermore, Rubica and Guanzon (2025) revealed that Project IDEAL contributed positively to the arithmetic performance of Grade 5 learners. Although both traditional and intervention approaches resulted in improvements, learners exposed to structured intervention activities demonstrated greater gains in mathematical achievement. The study recommended the continuous implementation and enhancement of intervention programs to maximize learning outcomes.

Other studies have likewise supported the effectiveness of numeracy intervention programs. Deliguin (2026) found that localized instructional materials significantly improved learners' mastery of the four fundamental operations in Mathematics. Likewise, Dulay (2025) reported that the Rapid Mathematics Assessment approach substantially increased learners' numeracy proficiency, demonstrating the value of diagnostic and formative assessment in strengthening mathematical competencies.

Teacher intervention programs play a crucial role in promoting numeracy development because they provide focused instruction, remediation, and learning support tailored to learners' specific needs. Research suggests that successful intervention programs incorporate differentiated instruction, regular assessment, immediate feedback, engaging learning activities, and continuous monitoring of learner progress. These approaches enable teachers to identify learning difficulties early and implement appropriate strategies to improve learners' mathematical understanding and confidence.

Despite the implementation of these strategic educational interventions, current assessments from local school divisions in 2025 and 2026 continue to highlight critical transition gaps. While the mandatory RMA implementation successfully diagnostic-profiles early elementary classes, there remains a distinct scarcity of localized, teacher-packaged daily intervention activities specifically optimized for higher elementary classes. Consequently, many Key Stage 2 learners continue to experience difficulties in numeracy. Challenges such as poor mastery of basic mathematical operations, limited problem-solving skills, low mathematical confidence, and learning gaps acquired from previous grade levels continue to affect learners' academic performance. These issues underscore the need for innovative and evidence-based teacher intervention programs that can effectively address learners' numeracy difficulties and support their academic success.

Given these concerns, the present study entitled "Underscoring the Adoptive Intervention strategies in Teaching Learning Numeracy Skills among Learner" is conceptualized to determine the effectiveness of a teacher-designed intervention program in improving the numeracy skills of Grade 5 learners. Specifically, the study seeks to provide empirical evidence on how structured intervention activities can enhance learners' mathematical competencies and contribute to improved educational outcomes. The findings of this study are expected to benefit learners, teachers, school administrators, curriculum planners, and future

researchers by providing valuable insights into effective practices for strengthening numeracy skills among elementary learners.

Theoretical Background

Mathematics is the investigation of numbers, quantities, geometry and space, just as their connections and capacities. It uses a mix of conceptual, procedural, and explanatory knowledge. In request to effectively solve mathematical problems, students need to procure this arrangement of information. To completely take part in their learning of Mathematics, students should initially increase an applied comprehension of Mathematics which prompts the obtaining of increased mathematical knowledge, assisted with developing different strands of numerical proficiency: productive disposition, procedural fluency, strategic competence and adaptive reasoning. Development in every capability prompts development in different proficiencies and prompts more information.

According to Bigge and Shermis (1999) learning theory is defined as "a systematic integrated outlook in regard of the nature of the process whereby people relate to their environments in such a way as to enhance their ability to use both themselves and their environments in a most effective way."

In this study, the researcher has chosen to concentrate on theories that are seemingly significant in influencing the way mathematics is currently studied, namely; constructivism, epistemology, theory of didactical situations, and cognitive learning theories. Each learning theory represents a particular view of knowledge.

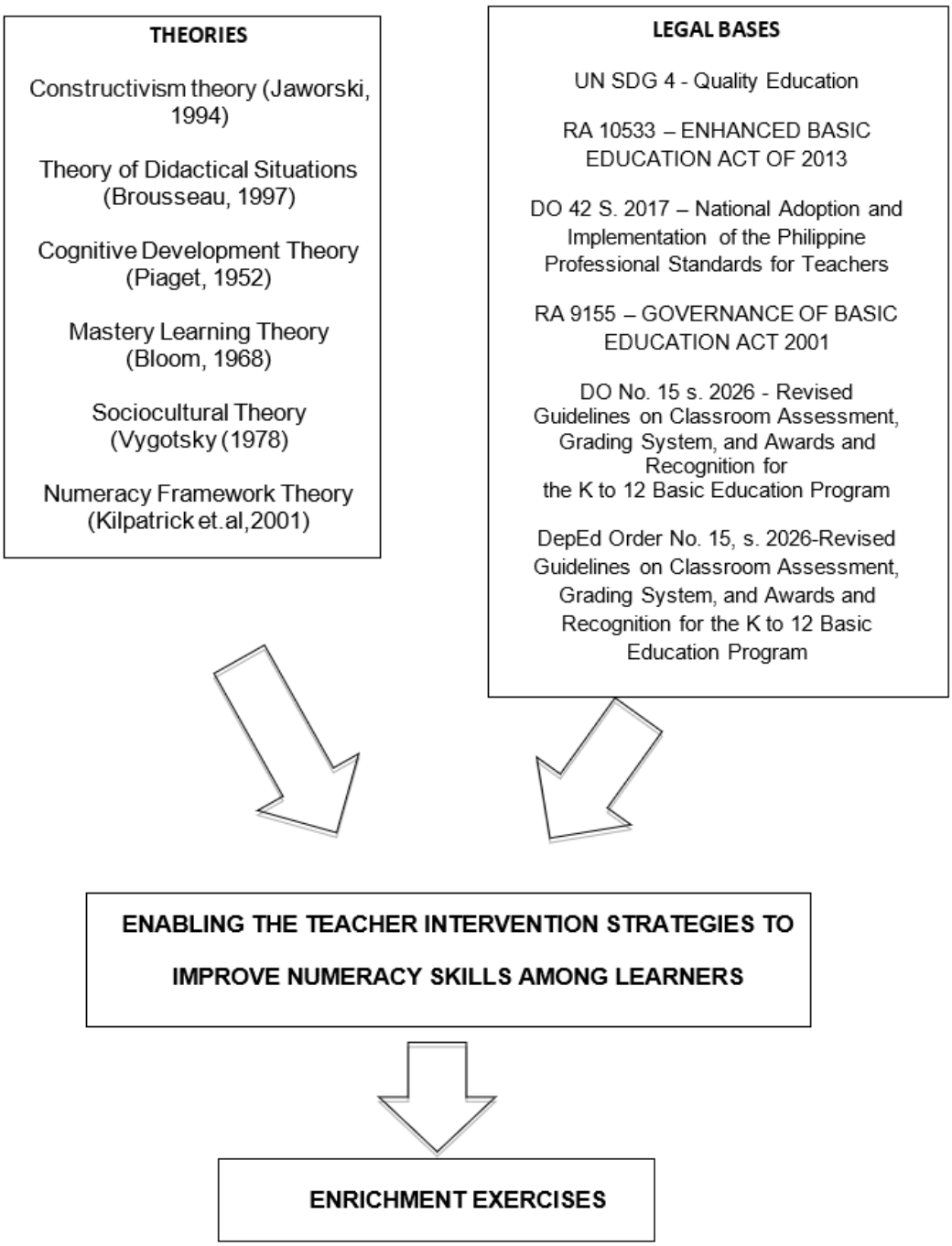


Figure 1 The Theoretical Framework

This research is anchored by Constructivism theory which is a theory of knowledge with roots in philosophy, psychology, and cybernetics (Jaworski, 1994). Community of mathematics educators have made aware of the variety of meanings that the students mobilize in tackling mathematical problems through the detailed analyses of classroom interaction and the sophisticated methodologies designed to scrutinize the negotiation of meanings underpinning the students 'conceptual growth. Constructivism has certainly helped to better understand the complexities surrounding the student's processes of learning.

The present study is further supported by the findings of Vicente Bermejo, Pilar Ester, and Isabel Morales (2021), who examined a constructivist intervention program designed to improve students' mathematical performance. Their study demonstrated that learners achieved significant gains in mathematics when instruction was grounded in constructivist principles that encouraged active engagement, problem-solving, and the construction of knowledge through meaningful learning experiences. The researchers emphasized that mathematical understanding develops when learners are provided opportunities to explore concepts, test their ideas, and connect new knowledge with prior experiences. These findings reinforce Jaworski's (1994) assertion that learning mathematics is an active process of meaning-making in which learners construct understanding through interaction with tasks, teachers, and their environment. Consequently, teacher intervention programs that incorporate constructivist strategies can enhance learners' numeracy skills by promoting deeper conceptual understanding and active participation in the learning process.

According to Brousseau (1997) in his Theory of Didactical Situations, there are conception of the role that teacher and students have to play in the classroom. First is the teacher's role which is not to show the students how to solve the problems, but rather to let the students deal with them, for doing mathematics does not consist only of receiving, learning, and sending correct, relevant mathematical messages. Second is the student's role which is to engage in mathematical problems in a way that is coherent with the professional scientific practice. In the course of a faithful reproduction of scientific activities, the student is required to produce, formulate, prove, and construct models, languages, concepts and theories.

The modern conception of teaching requires the teacher to provoke the expected adaptation in her students by a judicious choice of problems that she puts before them. These problems, chosen in such a way that the students can accept them, must make the students act, speak, think, and evolve by their own motivation.

This perspective is strongly supported by more recent research. For instance, Ruthven, Howe, and Luthman (2021) found that structured problem-based mathematics instruction significantly enhances learners' conceptual understanding when teachers carefully orchestrate tasks that allow students to explore multiple solution strategies. Their study highlights that when students are given autonomy within well-designed mathematical situations, they demonstrate deeper reasoning and improved problem-solving skills.

Similarly, Cai, Morris, Hohensee, and Hwang (2023) emphasized that inquiry-oriented and problem-centered mathematics instruction improves students' ability to construct mathematical meaning. Their findings show that learners perform better in numeracy and reasoning tasks when teachers act as facilitators who design tasks that promote exploration, communication, and justification of mathematical ideas.

These recent studies reinforce Brousseau's (1997) assertion that effective mathematics teaching requires the intentional design of learning situations that provoke students' cognitive engagement. In this sense, teacher intervention programs should not focus solely on demonstration but on creating structured mathematical environments where learners actively construct knowledge through interaction with problems, peers, and mathematical tools.

Jerome Bruner's Constructivist Theory (1966) complements Vygotsky's theory by emphasizing that learners actively construct knowledge through meaningful experiences and interactions with their environment. Bruner contended that learning is most effective when students discover concepts through guided inquiry and problem-solving exercises. He also established the concept of scaffolding, which involves teachers providing temporary assistance until students can execute tasks independently. In this study, teacher intervention programs use structured activities, guided exercises, and tailored instruction to help students actively engage in mathematical learning and gain a deeper knowledge of numerical concepts.

Bruner's hypothesis is backed by current research that emphasizes learner engagement and active participation in mathematics instruction. Sabado and Lastrella (2024) discovered that students' engagement in Mathematics 5 had a substantial impact on their academic achievement and suggested intervention

approaches that encourage active participation, meaningful activities, and learner-centered solutions. Their findings complement Bruner's constructivist perspective by indicating that when learners actively participate in the construction of mathematical knowledge, they display improved success and understanding.

Another significant framework is Jean Piaget's Cognitive Development Theory (1952). Piaget claimed that children go through developmental stages that affect their cognitive capacities and grasp of mathematical concepts. Key Stage 2 students often fall into the Concrete Operational Stage, which is when they begin to think logically about concrete circumstances and develop skills in classification, sequencing, conservation, and numerical reasoning. According to this approach, numeracy training should include hands-on activities, manipulatives, visual representations, and real-world applications to help students learn. Teacher intervention programs tailored to students' developmental requirements can significantly improve their arithmetic knowledge and performance.

Recent research confirms the efficacy of developmentally appropriate mathematics training. Iswara, Ahmadi, and Da Ary (2022) discovered that problem-solving activities embedded in learners' experiences greatly improved numeracy literacy skills in elementary children. Their findings underscored the necessity of offering real and meaningful learning experiences that correspond to learners' cognitive developmental stages, supporting Piaget's theory that children acquire mathematical concepts more efficiently through active contact with their surroundings.

Benjamin Bloom's Mastery Learning Theory (1968) provides additional support for this study. Bloom claimed that nearly all learners may master learning objectives if given enough time, effective instruction, corrective feedback, and assistance. According to the approach, learning issues should be discovered early on and remedied through remediation before students go to more challenging concepts. Teacher intervention programs incorporate the concepts of mastery learning by identifying learners' deficiencies, offering focused instructional help, and continuously assessing progress until mastery is attained. This strategy is especially helpful for closing numeracy deficits among Grade 5 learners.

Recent research on numeracy instruction substantially supports Bloom's Mastery Learning Theory. Bauyon (2023), through Project MBO (Mastery of Basic Operations), discovered that structured intervention activities greatly enhanced learners' numeracy and mathematics performance. The study indicated that learners performed better when core mathematical ideas were grasped before moving on to more advanced skills. Similarly, Deliguin (2026) found that localized intervention materials significantly improved learners' understanding of the four fundamental operations, highlighting the relevance of mastery-based remediation in numeracy development.

Learning occurs most effectively when instruction is provided within Zone of Proximal Development through appropriate guidance, scaffolding, and collaborative learning experiences. Vygotsky (1978) defined the ZPD as the gap between what learners can accomplish independently and what they can achieve with the assistance of a more knowledgeable individual, such as a teacher or peer. Continuous assessment and differentiated instruction ensure that interventions are responsive to learners' individual needs and promote meaningful mathematical learning.

In the context of this study, the Mathematical Proficiency Framework by Kilpatrick, Swafford, and Findell ((2001) provides a strong theoretical foundation for implementing teacher intervention strategies that strengthen learners' numeracy skills by improving their understanding of mathematical concepts, enhancing their computational fluency, developing their problem-solving and reasoning abilities, and fostering positive learning attitudes, emphasizes that mathematical proficiency is best developed through meaningful instruction, continuous practice, formative assessment, and timely teacher intervention that addresses learners' individual needs.

Furthermore, Albert Bandura's Social Learning Theory (1977) states that learning takes place through observation, imitation, and modeling. Learners gain knowledge and skills by witnessing the behaviors and techniques used by teachers and peers. Teachers in mathematics education act as role models for problem-solving procedures, computational methodologies, and mathematical reasoning. Teacher intervention programs introduce students to explicit examples, guided practice, and collaborative learning opportunities that help them acquire numeracy abilities.

Recent study highlights the importance of modeling and collaborative learning in mathematics education. Bacsal, Ibañez, and Pentang's (2022) study indicated that cooperative learning practices greatly enhanced learners' mathematical achievement and interest. Their findings imply that engagement, observation, and peer cooperation all improve mathematics learning outcomes, supporting Bandura's claim that

learning occurs through social interaction and observation of others' behaviors.

Finally, this study makes use of Richard Skemp's Theory of Relational Understanding (1976), which distinguishes between instrumental understanding (knowing rules and processes) and relational understanding (knowing what to do and why). Skemp maintained that genuine mathematics learning happens when students comprehend the relationships between topics rather than simply remembering techniques. Effective teacher intervention programs should consequently prioritize not only computational correctness but also the development of learners' conceptual knowledge, reasoning ability, and problem-solving skills.

Recent research highlights the role of conceptual thinking in numeracy development. Gonzales (2024) found that Project Math-GALING greatly enhanced learners' numeracy skills by integrating drills, guided activities, and conceptual comprehension of mathematical operations. Similarly, research on mathematics accomplishment has found that students who gain a deeper conceptual understanding have higher levels of engagement, achievement, and problem-solving ability. These findings support Skemp's hypothesis that relational awareness increases long-term mathematical proficiency and meaningful learning.

Various worldwide frameworks, national legislation, and educational policies that stress quality education, basic learning abilities, and learner accomplishment all promote the deployment of teacher intervention programs focused at improving numeracy skills among Grade 5 learners. These legal standards emphasize the necessity of improving learners' numeracy abilities through effective teaching techniques and tailored interventions to promote academic success and lifelong learning.

The United Nations Sustainable Development Goal (SDG) 4: Quality Education serves as the primary international framework for this study. SDG 4 was adopted by the United Nations in 2015 and is set to be achieved by 2030. Its goal is to "ensure inclusive and equitable quality education and promote lifelong learning opportunities for all." Specifically, Target 4.1 aims to ensure that all girls and boys get free, equitable, and high-quality primary and secondary education that leads to relevant and effective learning outcomes. Numeracy has been highlighted as one of the core talents required for students to attain academic achievement and effectively participate in society. The suggested teacher intervention program supports SDG 4 by addressing learning gaps and fostering better numeracy outcomes among Grade 5 learners.

According to Article XIV, Section 1 of the Philippine Constitution of 1987, the state must preserve and promote all citizens' rights to quality education at all levels, as well as take appropriate actions to make education accessible to all. This constitutional provision specifies the government's obligation for implementing educational programs and initiatives to ensure students gain critical knowledge, skills, and competences. The development of numeracy skills among elementary students directly contributes to the constitutional purpose of delivering excellent and accessible education.

Republic Act No. 10533, also known as the Enhanced Basic Education Act of 2013, establishes the K-12 Basic Education Program and stresses the formation of lifelong learners with the necessary skills for further education, employment, and entrepreneurship. Section 2 of the Act emphasizes the importance of a curriculum that is learner-centered, inclusive, and developmentally appropriate, promoting mastery of basic competencies such as mathematics. The law emphasizes the significance of offering interventions to meet learners' different educational requirements and learning challenges. This study contributes to the aims of RA 10533 by offering a teacher intervention approach to improve numeracy abilities among Grade 5 learners.

Republic Act No. 9155, often known as the Governance of Basic Education Act of 2001, creates a framework for shared governance in the educational system. The law enables principals and teachers to improve educational results via strong leadership and instructional assistance. It emphasizes accountability for learner performance and the execution of programs that address learners' needs. Teacher intervention strategies that address numeracy gaps align with the school's responsibility to increase academic achievement and provide high-quality learning experiences.

Republic Act No. 232, often known as the Education Act of 1982, recognizes each learner's right to a quality education that is appropriate to their individual and societal requirements. The Act highlights educational institutions' role in supporting students' intellectual growth and developing the capabilities required for personal and national development. Numeracy abilities are one of the important characteristics that schools must develop in order to prepare students for future academic and real-world challenges. Thus, implementing a numeracy intervention program aligns with the educational goals outlined in this law.

Crucial to the operationalization of teacher-led interventions is DepEd Order No. 15, s. 2026, titled the Revised Guidelines on Classroom Assessment, Grading System, and Awards and Recognition for the K to 12 Basic Education Program. This policy establishes a formalized Early Intervention Policy, legally mandating that educators actively identify learning gaps and execute immediate, targeted remedial measures during the ongoing quarter rather than waiting for terminal grading periods. Furthermore, the directive champions the Elicit-Student Response-Recognize-Use (ESRU) model as a systematic framework for formative assessment. This requires teachers to dynamically analyze student misconceptions in numeracy and adjust their pedagogical strategies in real time. For a study focusing on enabling teacher intervention strategies, DO 15, s. 2026 serves as the primary administrative mandate that legalizes, structures, and enforces the implementation of these localized numeracy interventions in the basic education classroom.

The Department of Education Order No. 42, s. 2017, titled the National Adoption and Implementation of the Philippine Professional Standards for Teachers (PPST), emphasizes teachers' responsibilities to meet learners' unique needs through diversified instruction and responsive teaching techniques. Teachers are expected to design and implement interventions that promote student achievement and address learning challenges under Domains 3 and 4 (Diversity of Learners and Curriculum and Planning, respectively). This policy encourages the creation and implementation of teacher intervention programs to improve numeracy skills among challenging students.

Department of Education Order No. 35, s. 2016, also known as The Learning Action Cell (LAC) as a K-12 Basic Education Program School-Based Continuing Professional Development Strategy, encourages teachers to work together to address instructional challenges and improve learner outcomes using evidence-based practices. The strategy encourages the development of intervention programs and creative teaching practices to bridge learning gaps in mathematics and other subjects. Teachers may create effective numeracy intervention programs that meet the requirements of their students by working together on planning and delivery.

Department of Education Order No. 34, s. 2022, or the School Calendar and Activities for School Year 2022-2023, reaffirmed the Department's commitment to learning recovery activities following the educational disruptions caused by the COVID-19 epidemic. The strategy emphasized the necessity of conducting intervention programs and remedial activities to remediate learning losses, particularly in fundamental abilities like reading and numeracy. This directive provides a solid foundation for implementing intervention programs aimed at improving students' mathematical competencies.

DepEd Order No. 15, s. 2026, or Revised Guidelines on Classroom Assessment, Grading System, and Awards and Recognition for the K to 12 Basic Education Program, strengthens the use of classroom assessment as an integral part of teaching and learning. The Order recognizes that learners who experience learning difficulties should receive appropriate remediation, differentiated instruction, and targeted intervention to help them attain the expected learning competencies. These provisions directly support the implementation of teacher intervention strategies aimed at improving learners' numeracy skills and ensuring that no learner is left behind.

Furthermore, the Department of Education's Basic Education Learning Continuity Plan (BE-LCP) and Learning Recovery and Continuity Plan stress the significance of closing learning gaps through targeted interventions, remediation programs, and assessment-based instructional practices. These efforts recognize that core numeracy abilities are essential markers of learner success, and that schools must take necessary measures to guarantee that students acquire the expected competency levels. The suggested teacher intervention program directly complements these national initiatives by offering structured assistance to students struggling with mathematics.

Collectively, these international frameworks, constitutional requirements, national laws, and educational programs give solid legal backing for the current research. They emphasize the importance of educational institutions and teachers implementing intervention programs that increase foundational numeracy abilities, improve learner achievement, and contribute to the realization of excellent education for all students.

THE PROBLEM

Statement of the Problem

This research aimed to determine the adjustment strategies in teaching learning numeracy skills of Grade 5 learners in Sto. Niño Dela Paz Elementary School, Division of Bohol during the School Year 2026–2027 as basis for a adoptive Teacher Intervention Plan.

Specifically, this study answered the following questions:

1. What is the profile of the respondents in terms of the:

1.1. teachers'
1.1.1. age;
1.1.2. gender;
1.1.3. civil status;
1.1.4. position;
1.1.5. teaching experience;
1.1.6. highest educational attainment;
1.1.7. relevant seminars, training and workshops attended

1.2. learners' age and gender?

2. To what extent are the teacher intervention strategies employed in enhancing numeracy skills related to:

2.1. behavioral;
2.2. cognitive, and
2.3. affective?

3. What is the level of numeracy skills of the respondents as to learners

3.1. number sense;
3.2. basic operations;
3.3. fractions and decimals;
3.4. problem-solving skills?

4. Is there a significant relationship between teacher adjusted intervention strategies and the numeracy skills of the learners?

5. What are the issues and concerns encountered related to adjusted intervention strategies in teaching numeracy skills?

6. Based on the findings, what Enrichment Exercises may be facilitated?

Null Hypothesis

Ho. There is no significant relationship between teacher intervention strategies and the numeracy skills of the learners.

Significance of the Study

This research on Enhancing Numeracy Skills of Grade 5 Learners of Sto. Niño Elementary School is crucial for stakeholders in the education system because it gives vital insights on how teacher intervention tactics improve learners' numeracy skills. Numeracy is a fundamental skill that allows learners to do mathematical operations, solve real-world problems, and excel in a variety of academic areas. Because mathematics served as the foundation for higher-order thinking and future learning, assessing the efficacy of teacher intervention tactics can help influence educational practices, strengthen mathematics instruction, and improve learner performance. The findings of this study helped with school-based planning, instructional enhancement, and intervention programs aimed improve numeracy outcomes among Grade 5 learners. In many ways, this study is relevant for the following:

Higher-level officials at the Department of Education (DepEd). This study provides empirical support for the Department of Education's initiatives to increase core learning competencies, particularly numeracy. The findings could help schools improve their mathematics intervention programs, learning recovery initiatives, and instructional support mechanisms. The findings may also help DepEd authorities develop policies and programs to alleviate learners' numeracy gaps and boost maths proficiency among elementary students.

School Heads. For school principals and instructional leaders, this study emphasizes the necessity of using effective teacher intervention tactics to address students' numeracy issues. The findings may help school administrators develop school-based numeracy programs, allocate instructional resources, monitor intervention efforts, and support teachers in using evidence-based methods. Furthermore, the proposed Teacher Intervention Program could serve as a foundation for enhancing mathematics education and student performance at the school.

Teachers. Teachers are among the key benefactors of this study since it gives information on intervention options for improving students' numeracy skills. The findings may assist teachers in identifying successful remediation, differentiated instruction, assessment, and instructional material use strategies. Teachers may be better equipped to handle learners' arithmetic issues, improve classroom instruction, and foster more learner engagement and accomplishment in Mathematics by implementing the recommended intervention approach.

Students. This study's findings have the potential to immediately help grade 5 students. Effective teacher intervention tactics can help students improve their understanding of basic mathematical processes, build their problem-solving skills, and boost their confidence in math. Improved numeracy abilities can lead to better academic performance, increased engagement in classroom activities, and better preparation for more sophisticated mathematical concepts in higher grades.

Parents. Although the study focused on teacher intervention tactics, the findings may help parents appreciate the importance of numeracy development in their children's education. The proposed intervention program may generate stronger support

for learners' mathematical activities at home, as well as increased collaboration between parents and teachers in addressing learners' academic needs.

Curriculum Planners and Mathematics Coordinators. The study's findings may be valuable to curriculum developers, mathematics coordinators, and instructional supervisors as they construct programs and activities to improve numeracy education. The findings may be used to build intervention resources, instructional aids, and professional development activities that promote effective mathematics teaching and learning.

Future Researchers. This study will be a significant resource for future research on numeracy skills, mathematics achievement, intervention programs, and instructional methodologies. Future researchers may use the findings to undertake comparable studies with different grade levels, learning competencies, or educational environments. It may also add to the expanding body of evidence about effective approaches for boosting numeracy outcomes among primary students.

The Researcher. As a teacher and graduate student pursuing a Master of Arts in Education with a concentration in Administration and Supervision, the researcher will benefit from this study by developing a better understanding of numeracy intervention tactics and their impact on learner achievement. The study will improve the researcher's knowledge and skills in educational leadership, instructional supervision, and program building, which may be used to improve teaching and learning processes at the school.

RESEARCH METHODOLOGY

This section presents the research methodology, encompassing the chosen method, study framework, research setting, respondents, data collection tools, procedures for gathering data, statistical analysis techniques, scoring methods, and key term definitions.

Design

The study used a descriptive quantitative research method to collect and analyze information. This method was chosen because it enabled an objective and statistical analysis of the research variables. To obtain vital information, the researcher used modified questionnaires as the primary data collection tool. These questionnaires were specifically designed to elicit meaningful information from teachers and school administrators. The descriptive quantitative technique utilized standardized data collection instruments, such as surveys or questionnaires, to ensure that the variables under research were measured consistently and accurately. The researcher employed modified questionnaires to acquire precise and reliable data that contributed to the overall results and conclusions of the study.

Flow of the Study

The flow of this study followed the Input–Process–Output (IPO) model to systematically examined the adjustment strategies in teaching and learning numeracy skills of Grade 5 learner in Sto. Niño Dela Paz Elementary School.

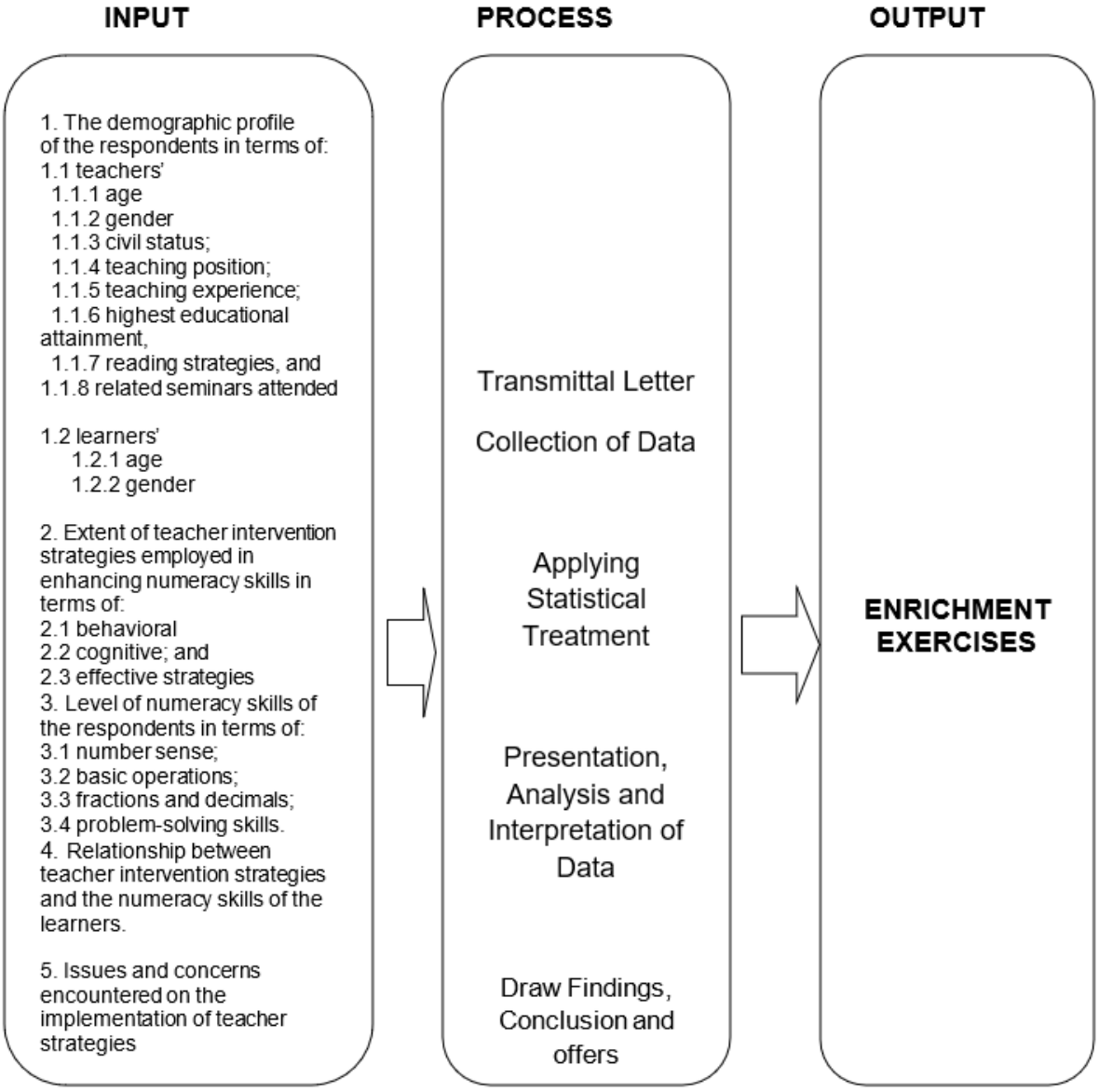


Figure 2 The Flow of the Study

The input of the study consist of the relevant variables gathered from the respondents and their teachers. For the pupils, the study considered their profile in terms of sex and gender. It also included the level of numeracy skills of the respondents as measured through the Rapid Mathematics Assessment (RMA), which classified learners according to their numeracy levels. For teachers, the study gathered data on the level of teacher intervention strategies across six dimensions: differentiated instruction, remediation activities, use of manipulatives and instructional materials, peer tutoring and feedback and contextualized and localized learning activities. These components reflected the extent to which teachers intervene in their learners educational and numeracy-related activities.

The process of the study utilized the descriptive–correlational research design. Descriptively, the study determined the profile of the respondents, the level of numeracy skills, and the level of teacher intervention strategies. Statistical tools are employed to compute frequencies, percentages, means, and other appropriate measures to describe the variables. Correlational analysis is then conducted to determine whether a significant relationship exists between teacher intervention strategies and the numeracy skills of the learners. Through this systematic analysis, the study identifies patterns and associations among the variables.

The output of the study was the development of an Enrichment Exercises based on the findings. The program was designed to enhance the numeracy skills of Grade 5 learners by addressing identified learning gaps and strengthening teachers' intervention strategies in Mathematics. It included differentiated instructional activities, remediation sessions, utilization of manipulative and contextualized learning materials, peer-assisted learning activities, formative assessment and feedback mechanisms, and capacity-building activities for teachers. The proposed intervention program aimed to improve learners' performance in the fundamental mathematical operations of addition, subtraction, multiplication, and division as measured through the Rapid Mathematics

Assessment (RMA), thereby promoting greater numeracy proficiency and academic achievement among Grade 5 learners.

Environment

This research was carried out at Sto. Niño Dela Paz Elementary School (School ID: 118504), one of the public elementary schools in the Loon South District, Division of Bohol. The school was situated in the Municipality of Loon, Province of Bohol, within the First Congressional District. Founded in 1935, the school had been serving the community for many years by providing quality elementary education. With a total land area of 9,269.81 square meters, it was categorized as a complete primary school.

At the time the study was conducted, the school served approximately 316 learners under the supervision of fourteen (14) teachers and one (1) school administrator, all of whom were female. The school provided a supportive learning environment that fostered both academic and extracurricular activities. It had been recognized for its outstanding achievements and commitment to quality education, as evidenced by its recognition as the Most Functional Library (Elementary) and its designation as a PASIDUNGOG 2017 Awardee.

The school was strategically located along the national road, making it easily accessible through various modes of land transportation. It was approximately 21 kilometers from Tagbilaran City and 5.2 kilometers from Loon South Central Elementary School. Its strategic location ensured convenient access for learners, teachers, parents, and other stakeholders, making it a suitable setting for the conduct of the study.



Figure 3 Research Environment of the Study

Respondents

The respondents of the study were the 37 Grade 5 learners and teachers of Sto. Nino Dela Paz Elementary School.

Table 1 Distribution of Respondents

Respondents Groups	Frequency	Percentage
Teachers	13	**26.00**
Learners	**37**	**74.00**
Total	**50**	**100**

Instrument

Three primary research instruments were utilized to gather the necessary data for this study. These instruments were administered to the teacher-respondents and Grade 5 learner-respondents to obtain comprehensive information regarding teacher intervention strategies and the numeracy skills of the learners.

The researcher utilized the Rapid Mathematics Assessment (RMA), a diagnostic assessment tool developed and adopted by the Department of Education (DepEd) through Office of the Undersecretary for Curriculum and Teaching Memorandum No. DM-CT-2023-322, entitled "Administration of the Rapid Mathematics Assessment (RMA). The RMA was designed to assess learners' foundational numeracy competencies and identify learning gaps that require appropriate instructional interventions.

For this study, the RMA framework were used to assess the numeracy competencies of Grade 5 learners in areas such as number sense, basic operations, problem-solving, and other grade-appropriate mathematical skills. The assessment results was utilized to determine the learners' numeracy achievement level and evaluate their mathematical performance. As a diagnostic assessment tool adopted by DepEd for monitoring learners' numeracy development, the RMA provides relevant data that can support instructional planning and intervention programs aimed at improving mathematics achievement.

For the assessment of teacher intervention strategies, the researcher utilized an adapted survey questionnaire anchored on the instrument developed by Hamzeh (2014) on teaching strategies in mathematics. The questionnaire was used to measure the extent of implementation of teacher intervention strategies in terms of behavioral, cognitive and effective strategies. The items was structured using a five-point Likert Scale to determine the extent to which these intervention strategies are employed by teachers in enhancing the numeracy skills of Grade 5 learners.

A researcher-made profile questionnaire was also utilized in gathering demographic information from both teacher and learner respondents. For teachers, the profile variables include age, gender, civil status, position, teaching experience, highest educational attainment, and relevant seminars, trainings, and workshops attended. For learners, the profile variables include age and gender. The information gathered was used to describe the characteristics of the respondents and provide contextual information relevant to the study.

These instruments collectively enabled the researcher to determined the profile of the respondents, assessed the extent of implementation of teacher intervention strategies, measured the numeracy skills of Grade 5 learners, examined the relationship between teacher intervention strategies and learners' numeracy skills, and provided the basis for the development of an Enrichment Exercises.

Data Gathering Procedure

The research was commenced after receiving approval of the title from the Dean of the Graduate School at Cebu Technological University, Main Campus.

To facilitate the administration of the questionnaire, the researcher sent a request letter to the School Head seeking permission to conduct the survey and specifying the retrieval date. Prior to answering the survey, the details of the questionnaire were thoroughly explained to the respondents via social media platforms or face-to-face discussions. The respondents were assured of the confidentiality of the information collected, with strict adherence to the Data Privacy Law and other relevant regulations protecting their rights. The collected data were then consolidated, tallied, and analyzed using statistical methods.

Statistical Treatment of Data

This research employed various statistical tools to address the specific problems stated in the study. Appropriate descriptive and inferential statistics was utilized to ensure accurate analysis, interpretation, and presentation of the gathered data.

Frequency Count and Simple Percentage. Frequency count and simple percentage were used to address sub-problem number one, which focused on the profile of the respondents. These statistical tools was utilized to describe the distribution of teacher respondents according to age, gender, civil status, position, teaching experience, highest educational attainment, and relevant seminars, trainings, and workshops attended. Likewise, these tools was used to present the profile of the learner respondents in terms of age and gender. The percentage distribution was provided a clear demographic overview of the respondents included in the study.

Weighted Mean. The weighted mean was used to determine the extent of teacher intervention strategies employed in enhancing numeracy skills as stated in sub-problem number two. Specifically, it was used to assess

the extent of implementation of differentiated instruction, remediation activities, use of manipulatives and instructional materials, peer tutoring and collaborative learning, assessment and feedback, and contextualized and localized learning activities.

Pearson Product-Moment Correlation Coefficient (r). The Pearson Product-Moment Correlation Coefficient (r) was employed to answer sub-problem number four, which seek to determined whether there is a significant relationship between teacher intervention strategies and the numeracy skills of Grade 5 learners.

Proposed Teacher Intervention Plan. The findings derived from the statistical analyses was served as the basis for the development of a proposed Enrichment Exercises. The plan was designed to strengthen teacher intervention strategies and enhance the numeracy skills of Grade 5 learners, particularly in areas identified as needing improvement.

Scoring Procedure

Extent of Teacher Intervention Strategies

The extent of teacher intervention strategies employed in enhancing the numeracy skills of Grade 5 learners was measured using the tool adapted from Hamzeh (2014). The instrument assesed the implementation of intervention strategies in terms of behavioral, cognitive and effective strategies.

Responses was scored using a five-point Likert Scale and interpreted as follows:

Weight	Range	Category	Verbal Description
5	4.21 – 5.00	Very Great Extent	The intervention strategy is always implemented and consistently observed.
4	3.41 – 4.20	Great Extent	The intervention strategy is often implemented and observed.
3	2.61 – 3.40	Moderate Extent	The intervention strategy is sometimes implemented and observed.
2	1.81 – 2.60	Less Extent	The intervention strategy is seldom implemented and observed.
1	1.00 – 1.80	Very Less Extent	The intervention strategy is rarely or never implemented and observed.

Level of Numeracy Skills

The numeracy skills of the Grade 5 learners was assessed using the Rapid Mathematics Assessment (RMA). The assessment measured learners' competencies in number sense, basic operations, fractions and decimals, and problem-solving skills. The learners' scores was interpreted using the following proficiency scale:

Score Range (%)	Category	Verbal Description
90 – 100	Highly Proficient	Demonstrates advanced mastery of numeracy competencies and consistently applies mathematical concepts and skills accurately and independently.
80 – 89	Proficient	Demonstrates satisfactory mastery of numeracy competencies and applies mathematical concepts and skills with minimal errors.
70 – 79	Nearly Proficient	Demonstrates developing mastery of numeracy competencies but still requires occasional assistance in applying mathematical concepts and skills.
60 – 69	Low Proficient	Demonstrates limited mastery of numeracy competencies and requires additional instructional support and practice.
Below 60	Not Proficient	Demonstrates insufficient mastery of numeracy competencies and requires intensive intervention and remediation.

The results of the Rapid Mathematics Assessment (RMA) was utilized to determine the numeracy proficiency level of the Grade 5 learners. The findings will further served as the basis for the development of the Enrichment Exercise aimed at improving learners' numeracy performance.

DEFINITION OF TERMS

To aid the readers demonstrate clear understanding about this research, the following terms and phrases are operationally defined:

Assessment and Feedback. This refers to the intervention strategy employed by teachers through regular monitoring of learners' performance, provision of feedback, and use of assessment results to improve the numeracy skills of Grade 5 learners.

Basic Operations. This refers to the Grade 5 learners' competency in performing the four fundamental mathematical operations, namely addition, subtraction, multiplication, and division, as measured through the Rapid Mathematics Assessment (RMA).

Contextualized and Localized Learning Activities. This refers to the intervention strategy employed by teachers through the use of real-life situations, local examples, and community-based learning experiences to enhance learners' understanding of mathematical concepts.

Differentiated Instruction. This refers to the intervention strategy employed by teachers through the modification of instructional methods, activities, and learning tasks to address the varying needs, abilities, and learning styles of Grade 5 learners.

Fractions and Decimals. This refers to the learners' competency in understanding, representing, comparing, and performing mathematical operations involving fractions and decimals as measured through the Rapid Mathematics Assessment (RMA).

Grade 5 Learners. This refers to the pupils enrolled in Grade 5 of Sto. Nino Elementary School during the School Year 2026–2027 who served as the learner-respondents of the study.

Mathematical Reasoning. This refers to the learners' ability to analyze mathematical situations, justify solutions, and apply logical thinking in solving mathematical problems as measured through the Rapid Mathematics Assessment (RMA).

Number Sense. This refers to the learners' understanding of numbers, number relationships, and numerical representations as measured through the Rapid Mathematics Assessment (RMA).

Numeracy Skills. This refers to the level of proficiency of Grade 5 learners in number sense, basic operations, fractions and decimals, problem-solving skills, and mathematical reasoning as measured through the Rapid Mathematics Assessment (RMA).

Peer Tutoring and Collaborative Learning. This refers to the intervention strategy employed by teachers wherein learners work collaboratively and assist one another in performing mathematical tasks and activities.

Problem-Solving Skills. This refers to the learners' ability to apply mathematical concepts, strategies, and procedures in solving routine and non-routine mathematical problems as measured through the Rapid Mathematics Assessment (RMA).

Rapid Mathematics Assessment (RMA). This refers to the assessment tool utilized in the study to determine the numeracy proficiency level of Grade 5 learners in the areas of number sense, basic operations, fractions and decimals, problem-solving skills, and mathematical reasoning.

Remediation Activities. This refers to the intervention strategy employed by teachers through supplementary lessons, drills, reinforcement exercises, and corrective instruction to address learners' numeracy difficulties.

Teacher Intervention Program. This refers to the proposed program developed from the findings of the study to strengthen teacher intervention strategies and improve the numeracy skills of Grade 5 learners.

Teacher Intervention Strategies. This refers to the instructional approaches employed by teachers to enhance learners' numeracy skills, specifically differentiated instruction, remediation activities, use of manipulatives and instructional materials, peer tutoring and collaborative learning, assessment and feedback, and contextualized and localized learning activities.

Teachers. This refers to the Grade 5 Mathematics teachers of Sto. Nino Elementary School who served as the teacher-respondents of the study.

Use of Manipulatives and Instructional Materials. This refers to the intervention strategy employed by teachers through the utilization of concrete objects, visual aids, learning resources, and instructional materials to facilitate the understanding of mathematical concepts.

2. PRESENTATION, DATA ANALYSIS, AND INTERPRETATION

This chapter presents the data obtained from the respondents of the study with the corresponding analysis and interpretation. The respondents of this study consisted of 37 students and 13 teachers for a total of 50 respondent groups from Sto. Niño Dela Paz Elementary School, Loon South District, Division of Bohol.

This chapter comprised six (6) distinct sections.

The first part deals with the relevant information of the teacher respondents in terms of their age, gender, civil status, teaching position, highest educational attainment, number of years in service, and relevant training, seminars, and workshops attended.

The second part of this chapter deals with the relevant information of the student respondents in terms of their age and gender.

The third part deals with the extent of teacher intervention strategies employed in enhancing numeracy skills in terms of behavioral, cognitive and affective.

The fourth part assesses the level of numeracy skills of the respondents as to learners' number sense, basic operations, fractions and decimals, and problem-solving skills.

Moreover, this research tests the relationship between teacher intervention strategies and the numeracy skills of the learners.

Lastly, the issues and concerns encountered in teaching numeracy skills.

RELEVANT INFORMATION OF THE RESPONDENTS

The following tables reveal the relevant information of the respondents in terms of their age, gender, civil status, highest educational attainment, number of years in service, teaching position, and relevant training, seminars, and workshops attended.

Age. Table 2 presents the profile of the respondents in terms of age.

Table 2

Age	Frequency n = 13	Percentage
46 and above	6	46.15
41 – 45 years old	3	23.08
36 – 40 years old	3	23.08
31 – 35 years old	1	7.69
Total	**13**	**100**
Average	**42.69**	**-**
Standard Deviation	**5.34**	**-**

Age Profile

Table 2 presents the demographic profile of the teacher-respondents in terms of age, detailing the frequency distribution, percentage allocation, mean, and standard deviation. As gleaned from the data, a significant portion of the teacher-respondents belong to the senior cohort, with 6 out of 13 teachers (46.15%) aged 46 and above. This is followed equally by the 41–45 and 36–40 age brackets, each representing 3 teachers (23.08%). Conversely, only 1 respondent (7.69%) falls within the younger bracket of 31–35 years old, and none are below 31 years of age. Overall, the data yields an average age of 42.69 years old, indicating that the teaching force managing Grade 5 mathematics in Sto. Niño Dela Paz Elementary School is largely composed of mature, mid-career to senior educators. The standard deviation of 5.34 further suggests low variance or high homogeneity in the age distribution, meaning the teachers' ages generally cluster closely around this seasoned age group.

This age profile indicates a highly mature demographic of educators who have accumulated substantial years of systemic exposure within the classroom environment. In the context of mathematics instruction, an older, seasoned teaching workforce implies strong pedagogical content knowledge (PCK) and deeply rooted classroom management skills built over decades of direct student interaction. However, this demographic landscape also highlights a critical structural reality: senior teachers, while exceptionally grounded in traditional methodologies, often face unique adjustments when adapting to rapid shifts in digital educational tools, differentiated diagnostic software, and modern post-pandemic numeracy frameworks. This finding aligns closely with the study of Santos and Reyes (2023), who noted that the demographic landscape of public school teachers in the Philippines is heavily weighted toward mature educators. They argued that while mature teachers offer foundational stability in handling classroom behavior, they require continuous, specialized upskilling to align their teaching routines with innovative, learner-centered frameworks. Furthermore, Tan (2025) observed that an average age hovering in the early 40s represents an optimal blend of instructional maturity and potential for professional growth. However, Tan emphasized that traditional, decades-old remediation models must be deliberately upgraded through structural intervention plans to prevent pedagogical stagnation. In addition, contemporary literature by Alvarez (2024) highlights that mature teachers are highly effective at providing structural and behavioral strategies due to

their extensive experience, but may require collaborative support—such as Professional Learning Communities (PLCs)—to successfully implement highly intensive cognitive and affective intervention models designed for modern, media-distracted intermediate learners.

Gender. Table 3 presents the profile of the respondents in terms of gender.

Table 3 Gender Profile

Gender	Frequency n = 13	Percentage
Male	0	0
Female	13	100
Total	**13**	**100**

Table 3 presents the demographic profile of the teacher-respondents in terms of gender, outlining the frequency distribution and percentage allocation of the group. As gleaned from the data, all 13 respondents are female, representing exactly 100% of the teaching cohort managing Grade 5 mathematics in Sto. Niño Dela Paz Elementary School, while the male demographic stands at 0%. This absolute homogeneity reveals a completely female-dominated instructional environment for intermediate mathematics in the station under study.

This absolute gender distribution reflects a widespread systemic pattern within the basic education landscape of the Philippines, where the elementary teaching force is heavily represented by female educators. In the field of primary and intermediate mathematics instruction, an all-female teaching workforce brings distinct instructional characteristics, particularly in terms of meticulous lesson execution, relational teaching, and a strong capacity for providing affective support to young learners struggling with numerical concepts. This finding directly mirrors the reports from the Department of Education (DepEd, 2023) personnel metrics, which indicate that the overwhelming majority of classroom teachers at the primary level across various school divisions are female. Furthermore, Castro and Villanueva (2024) pointed out that while a female-dominated elementary workforce ensures high levels of maternal nurture and structural compliance in the classroom, it also places the responsibility of crafting extensive numeracy interventions entirely on female educators who often balance heavy clerical workloads with instructional tasks. This dynamic is further discussed by Mercado (2025), who noted that female elementary teachers frequently demonstrate strong collaborative tendencies, making them highly receptive to mentoring frameworks like Lesson Study and Professional Learning Communities (PLCs). Additionally, Ramos (2026) emphasized that a uniform gender distribution in the teaching force requires intervention plans to focus heavily on strengthening pedagogical strategy without assuming gender-based differences in technological or mathematical adaptation, assuring that professional development models remain focused strictly on tactical, diagnostic-driven instructional solutions.

Civil Status. Table 4 presents the profile of the respondents in terms of civil status.

Table 4 Civil Status Profile

Civil Status	Frequency n = 13	Percentage
Married	11	84.62
Single	2	15.38
Total	**13**	**100**

The demographic distribution of the teacher-respondents according to their civil status is delineated in Table 4, which breaks down the group's frequencies and percentages. The statistical data reveals that a substantial majority of the educators are married, accounting for 11 out of the 13 participants (84.62%). Conversely, the remaining segment consists of single individuals, representing a minor proportion of 2 respondents (15.38%). This distribution clearly indicates that the instructional ecosystem for Grade 5 mathematics at Sto. Niño Dela Paz Elementary School is overwhelmingly managed by educators with established family units.

This high concentration of married teachers reflects a socio-demographic stability that heavily influences classroom dynamics and professional longevity. In the context of implementing intensive mathematics interventions, married educators often bring a mature sense of patience, domestic problem-solving skills, and a deeper developmental understanding of children, which can translate into greater empathy when dealing with struggling or non-numerate learners. This structural baseline is supported by the findings of Delos Santos (2023), who discovered that married public school teachers in the Visayas region often demonstrate higher structural resilience and emotional stability in managing heavy classroom demands due to their established domestic support systems. However, Bonganciso and Torcende (2024) pointed out that married female educators

simultaneously face the unique challenge of balancing intense domestic responsibilities with the increasingly demanding clerical expectations of public school instruction, which can restrict the personal time required to develop contextualized remedial materials. Furthermore, Gomez (2025) noted that a teaching cohort primarily composed of married individuals tends to value highly structured, predictable, and sustainable professional development schedules rather than erratic, after-school intervention timelines. Additionally, Salazar (2026) emphasized that understanding the civil status profile allows educational managers to design a Teacher Intervention Plan that respects work-life balance through optimized collaborative hours, such as school-based Professional Learning Communities (PLCs) conducted within official working hours, ensuring maximum focus and commitment to improving student numeracy.

Teaching Position. Table 5 presents the profile of the respondents in terms of teaching position.

Table 5 Teaching Position Profile

Teaching Position	Frequency n = 13	Percentage
Teacher III	10	76.92
Teacher I	3	23.08
Total	**13**	**100**

Table 5 delineates the professional distribution of the teacher-respondents according to their current institutional ranks and designations within the school. The generated data indicates that an overwhelming majority of the cohort holds the rank of Teacher III, comprising 10 out of the 13 educators (76.92%). The remaining portion of the teaching force consists of Teacher I personnel, accounting for 3 individuals (23.08%). Notably, intermediate mathematics instruction at Sto. Niño Dela Paz Elementary School is driven primarily by senior classroom teachers (Teacher III), while entry-level instructors fill out the remainder of the faculty group.

This structural concentration at the Teacher III level signals a highly stable professional environment rich in pedagogical experience and internal leadership capacity. In the Department of Education (DepEd) career progression, achieving the rank of Teacher III implies years of satisfactory service, completion of professional training, and a deep familiarity with curriculum execution. This baseline represents a significant advantage for implementing complex numeracy programs, as these teachers are generally well-equipped to manage classroom interventions independently. This perspective aligns with the findings of Valenzuela (2023), who noted that a school faculty populated by a high percentage of Teacher III personnel possesses a strong baseline for peer-led instructional coaching and curriculum contextualization. However, Basilio and Cañete (2024) pointed out that while Teacher III educators display high competence, they are also frequently burdened with administrative and ancillary tasks within the school, which can inadvertently limit their time for focused, one-on-one remedial interventions. Furthermore, Alegre (2025) observed that the professional needs of Teacher III educators differ significantly from entry-level instructors; they require specialized, advanced professional development that goes beyond basic pedagogical methods. This distinction underlines the conclusion by Dumaluan (2026), who emphasized that any proposed Teacher Intervention Plan must leverage this advanced capacity by involving Teacher III educators as mentors or professional leaders within school-based Professional Learning Communities (PLCs), thereby creating a sustainable framework for elevating student numeracy performance.

Teaching Experience. Table 6 indicates the number of years in service of the respondents.

Table 6 Teaching Experience

Teaching Experience	Frequency n = 13	Percentage
More than 16 years	8	61.54
11 – 15 years	1	7.69
4 – 6 years	2	15.38
0 – 3 years	2	15.38
Total	**13**	**100**
Average	**13.38**	**-**
Standard Deviation	**6.54**	**-**

The length of institutional service rendered by the teacher-respondents is detailed in Table 6, capturing their instructional longevity through frequency, percentage distribution, mean, and standard deviation. The empirical findings reveal that a commanding majority of the faculty members are highly seasoned veterans, with 8 out of the 13 educators (61.54%) possessing more than 16 years of teaching experience. The middle tier is minimally represented, with only 1 individual (7.69%) falling into the 11–15 years' bracket, while the early-career brackets

of 4–6 years and 0–3 years each contain 2 respondents (15.38%). Cumulatively, the data yields a high average teaching experience of 13.38 years, reflecting a deeply entrenched instructional workforce. However, the standard deviation of 6.54 indicates a notable variance or bimodal distribution within the school, highlighting a stark professional split between an ultra-experienced veteran majority and a smaller cluster of newer, developing educators.

This distinct experience profile carries profound implications for the delivery of mathematics interventions in the intermediate grades. A school dominated by teachers with over a decade and a half of classroom exposure possesses a vast reservoir of experiential knowledge, diagnostic intuition, and refined classroom management capabilities, making them highly adept at identifying student behavioral bottlenecks. However, the wider standard deviation warns of a pedagogical gap: while veterans rely on tried-and-tested traditional approaches, the newer generation of teachers (0–6 years) is often more fluent in modern digital applications and student-centered diagnostic toolkits. This duality aligns with observations by Magallanes (2023), who noted that public schools in the Visayas region frequently feature a polarized teaching force, requiring differentiated professional development strategies rather than a one-size-fits-all approach. Furthermore, Villamil and Ortega (2024) argued that high instructional longevity provides the emotional resilience needed to manage persistent numeracy deficits, but notes that veteran teachers frequently need structured support to unpack complex, modern post-pandemic assessment frameworks. This observation is expanded by Suarez (2025), who pointed out that schools with an average service time exceeding 12 years are uniquely primed for internal mentorship programs, as long-serving teachers excel at mentoring novice peers in local instructional traditions. Concurrently, recent literature by Abadiano (2026) concludes that to maximize the utility of such an experienced cohort, a proposed Teacher Intervention Plan must move away from top-down directives and instead establish collaborative mentoring structures, allowing senior educators to guide the school-wide implementation of new numeracy interventions while simultaneously learning modern diagnostic technologies from their younger counterparts.

Highest Educational Attainment. Table 7 shows the highest educational attainment of the respondents.

Table 7 Highest Educational Attainment

Highest Educational Attainment	Frequency n = 13	Percentage
Master's Degree	1	7.69
Master's Degree Units	6	46.15
Bachelor Degree	6	46.15
Total	**13**	**100**

Table 7 delineates the professional qualification profile of the surveyed teachers, categorizing frequencies and percentages based on their highest academic credentials. The gathered metrics indicate that the faculty is evenly divided into two main categories: 6 out of 13 educators (46.15%) possess Bachelor's Degrees as their highest qualification, while an equivalent number of 6 teachers (46.15%) have attained Master's Degree Units. The residual segment of the cohort comprises a solitary individual (7.69%) who has successfully obtained a Master's Degree. These statistics indicate that over fifty percent of the Grade 5 mathematics teaching staff at Sto. Niño Dela Paz Elementary School has actively engaged in postgraduate studies, demonstrating a robust institutional commitment to ongoing professional development.

This formal academic background is crucial in assessing a faculty's ability to develop and implement advanced numeracy treatments. Educators engaged in postgraduate coursework typically get a more profound comprehension of educational research, curriculum development, and advanced teaching approaches, enabling them to more effectively analyze student learning deficiencies. This baseline is corroborated by Estrella (2023), who observed that public school teachers with postgraduate experience exhibit a more advanced methodology in managing classroom action research and specialized remedial frameworks. Quimpo and Macale (2024) identified a substantial impediment in rural school divisions: the disparity between acquiring graduate credits and obtaining the degree, as excessive teacher workloads frequently hinder thesis completion and obstruct the comprehensive implementation of advanced theories in everyday instruction. From an institutional growth perspective, Cabahug (2025) contended that a school with a significant concentration of teachers possessing postgraduate qualifications provides an optimal foundation for collaborative curriculum development, as these educators are already acquainted with advanced pedagogical concepts. Thus, Saceda (2026) determined that to reconcile the disparity between academic theory and practical classroom requirements, the suggested Teacher Intervention Plan must be meticulously designed to leverage existing advanced knowledge, employing postgraduate-trained faculty to lead data-driven remedial strategies and mentor peers with basic baccalaureate degrees.

Relevant Training, Seminars, and Workshops Attended. Table 8 presents the highest level of appropriate training, seminars, and workshops attended by the respondents.

Table 8 Relevant Training, Seminars, and Workshops Attended

Relevant Training, Seminars, and Workshops Attended	Frequency n = 13	Percentage
National	1	7.69
Division	6	46.15
District	6	46.15
Total	**13**	**100**

The professional development profile of the participants, categorized by the most extensive capacity-building programs they have attended, is presented in Table 8, which delineates their training history in terms of frequencies and percentages. The statistical analysis indicates that the faculty is equally distributed across regional training levels: 6 out of 13 educators (46.15%) have attained the Division level of training, while an equivalent number of 6 teachers (46.15%) have their highest training restricted to the District level. Only one respondent (7.69%) has participated in a national-level training seminar or workshop. These indicators suggest that the whole Grade 5 mathematics teaching staff at Sto. Niño Dela Paz Elementary School has undergone localized professional development, with just a minimal percentage participating in extensive, national educational forums.

The extent of professional training that educators get significantly influences their capacity to implement specific numeracy interventions in the classroom. Teachers who engage in localized district and division workshops acquire significant understanding of contextualized regional policies and fundamental curricular adjustments. Nonetheless, the absence from national training may restrict their access to innovative educational technologies, sophisticated mathematical diagnostic instruments, and modern theories addressing intricate learning challenges. Patalinghug (2023) asserts that public school teachers, who predominantly depend on local district-level seminars, tend to excel in comprehending localized student behaviors; yet, they may encounter deficiencies while implementing advanced, data-driven remedial frameworks. Banzon and Lim (2024) noted that division and district seminars in rural areas often emphasize broad administrative modifications instead of offering in-depth, subject-specific training in mathematical concepts such as advanced problem-solving or abstract fractions. Magsino (2025) contended that a teaching workforce with substantial division-level experience provides a dependable foundation for executing standardized regional programs, including DepEd's numeracy initiatives. Galicia (2026) determined that to reconcile national pedagogical standards with local classroom conditions, the suggested Teacher Intervention Plan must establish a sustainable internal capacity-building model. This framework should enable the division and nationally-trained faculty to provide school-based training sessions, enabling the effective dissemination of contemporary, high-impact numeracy intervention tools to all classroom instructors.

Profile of Students. The table below presents the profile of the learners from the research environment as to their age.

Age. Table 9 presents the profile of the respondents in terms of age.

Table 9 Age Profile

Age	Frequency n = 37	Percentage
11 years old	11	29.73
10 years old	26	70.27
Total	**37**	**100**
Average	**10.30**	**-**
Standard Deviation	**0.46**	**-**

Table 9 presents the developmental and chronological classification of Grade 5 learner-respondents by age, including frequency distribution, percentage allocation, computed mean, and standard deviation. The empirical data indicates that a predominant majority of the student cohort comprises 10-year-olds, including 26 out of the 37 examined persons (70.27%). The remaining section consists of 11-year-old students, accounting for a lesser percentage of 11 learners (29.73%). The group has an average age of 10.30 years, with a standard deviation of 0.46. The minimal statistical variation indicates that the student population examined is remarkably homogeneous, closely grouping around the anticipated baseline age for the intermediate grade level.

This concentrated age profile signifies that the learners are functioning inside the distinct cognitive and developmental transition period typical of the late concrete operational stage. In mathematics education, pupils aged 10 to 11 are expected to transition from tangible numerical representations to abstract logical processes, including the manipulation of fractions, decimals, and multi-step word problems. The considerable homogeneity of this group offers a pedagogical benefit, facilitating the execution of cohesive classroom interventions devoid of the confounding variables introduced by over-aged or markedly under-aged students. This developmental baseline corresponds with Aquino's (2023) observations, indicating that Grade 5 students in the Philippine public school system reach a pivotal stage where teaching practices must intentionally foster independent mathematical reasoning. Legaspi and Dizon (2024) indicated that an average age of 10.30 years is ideal for the initiation of systematic cognitive rehabilitation, as children at this age exhibit the necessary attention span and cognitive preparedness for analytical activities. Salvador (2025) observed that a uniform age cohort enables researchers to eliminate age-related developmental delays in the assessment of numeracy deficiencies, thereby identifying instructional quality and strategy implementation as the principal determinants of performance. Torres (2026) concluded that to optimize the efficacy of developmental stability, the proposed Teacher Intervention Plan should emphasize structured, age-appropriate problem-solving activities and visual frameworks, enabling 10- and 11-year-old learners to effectively transition from basic mechanical calculations to advanced mathematical understanding.

Gender. Table 10 presents the profile of the respondents in terms of gender.

Table 10 Gender Profile

Gender	Frequency n = 37	Percentage
Male	19	51.35
Female	18	48.65
Total	**37**	**100**

Table 10 delineates the gender distribution of the Grade 5 learner-respondents, presenting the frequency counts and percentage allocations for the dataset. The statistical data reveals that among the 37 learners polled, 19 are male, constituting a marginal majority at 51.35%. The remaining group comprises 18 female students, accounting for \$48.65\%\$ of the overall sample. This equitable distribution illustrates a commendable gender representation within the research environment at Sto. Niño Dela Paz Elementary School demonstrates near-equivalence between the two groups.

This equitable gender profile establishes a neutral benchmark that reduces gender bias when evaluating student numeracy performance and reactions to teacher interventions. In mathematics education, attaining near-equal gender distribution guarantees that classroom data accurately represents the whole student population, rather than favoring the learning preferences of a particular gender. The structural configuration is corroborated by Sevilla (2023), who observed that gender-balanced classrooms in elementary schools facilitate a more objective assessment of teaching strategies, enabling researchers to evaluate the overall impact of pedagogical interventions without demographic imbalances influencing the results. Del Rosario and Mendoza (2024) contended that contemporary intermediate mathematics education should be structured to engage both genders equitably, transcending conventional biases through the implementation of diverse behavioral and cognitive challenges that resonate with all learners. From an intervention perspective, Arce (2025) noted that male and female intermediate learners frequently exhibit divergent responses to affective techniques; one group may prefer verbal reinforcement, whereas the other may derive greater benefit from structural or gamified mathematical difficulties. Jimenez (2026) concluded that to enhance numeracy development among this diverse student population, the proposed Teacher Intervention Plan must incorporate gender-inclusive remediation toolkits, ensuring that instructional activities are equitably designed to meet the conceptual needs of both male and female learners effectively.

EXTENT OF TEACHER INTERVENTION STRATEGIES EMPLOYED IN ENHANCING NUMERACY SKILLS

The following tables reveal the extent of teacher intervention strategies employed in enhancing numeracy skills in terms of behavioral, cognitive and affective strategies.

Behavioral. This dimension focuses on the structural and reinforcement mechanisms utilized by teachers to shape, direct, and sustain productive learning actions in mathematics.

Table 11 Behavioral

Items	Weighted Mean	Standard Deviation	Interpretation
I provide the student with information regarding his answer' accuracy all the time	3.85	0.80	High Extent
I train my students on distinguishing between different characteristics of the same concept	3.92	0.49	High Extent
I use specific questions that have specific answers	3.85	0.69	High Extent
I help my students imitate desired models	3.85	0.55	High Extent
I award students for his right answer	4.08	0.76	High Extent
I use direct presentation to provide students with information	4.15	0.80	High Extent
I care about rectifying students' undesired behaviors	4.00	0.41	High Extent
I neglect undesired behaviors in the teaching – learning situations	2.85	0.80	Moderate Extent
I dissemble the teaching – learning material into specific tasks that need specific responses	3.46	0.78	High Extent
I depend on criteria in evaluating my students	3.46	0.66	High Extent
I train students on learning simple behaviors till they reach to the complicated behavior	4.08	0.49	High Extent
I eliminate any undesirable stimuli after student does the correct behavior	3.62	0.51	High Extent
I train students to determine the objectives they want to achieve	3.85	0.69	High Extent
I make advantage of the contract procedures he does with his students for the purpose of achieving the teaching – learning tasks.	3.46	0.66	High Extent
I provide students with a chance to apply new knowledge in new real life situations.	4.31	0.63	Very High Extent
COMPOSITE MEAN	**3.78**	**0.65**	High Extent

Legend: 4.21 – 5.00 Very High Extent; 3.41 – 4.20 High Extent; 2.61 – 3.40 Moderate Extent; 1.81 – 2.60 Low Extent; 1.00 – 1.80 Very Low Extent

The scope of behavioral intervention techniques used by teachers to foster, mold, and sustain students' numeracy development is shown in Table 11. The empirical measurements show that the whole reaction has a composite mean of 3.78 (SD = 0.65), which is clearly in the High Extent range. This suggests that the teachers of mathematics in Grade 5 regularly include behavioral and structural reinforcement mechanisms into their lesson plans. With a very high extent mean of 4.31 (SD = 0.63), the highest-rated item focuses on contextualized application, with teachers claiming that they give pupils opportunities to apply new knowledge in real-life settings. The structural reliance on direct presentation to transmit quantitative information (WM = 4.15, SD = 0.80) and the twin instructional techniques of rewarding right answers and scaffolding basic-to-complex behaviors, both of which earn a high extent mean of 4.08, come next. On the other hand, the reverse-coded variable of ignoring undesirable actions in teaching-learning scenarios has the lowest score in this matrix, yielding a modest extent mean of 2.85 (SD = 0.80). The faculty members' behavioral patterns appear to be quite cohesive and uniform, as indicated by the overall low standard deviations across all items.

In order to address intermediate numeracy gaps, the mathematical environment primarily relies on structured stimulus-response routines and experiential reinforcement, as seen by the widespread implementation of behavioral therapies. Teachers create an instant functional connection between abstract numbers and everyday situations by emphasizing practical applications and clear directions. This helps students feel less anxious about arithmetic and less likely to be distracted. These teachers are proactive classroom supervisors who step in right away rather than disregarding instructional disruptions or arithmetic misconceptions, as seen by the low mean on structurally neglecting undesirable behavior. Santiago (2023) supports this dynamic by pointing out that because concrete intermediate learners need unambiguous behavioral markers to maintain analytical focus, elementary math teachers in public schools mainly rely on direct visual models and explicit reinforcement loops. In order to keep students from becoming solely reliant on outside cues, Bautista and Pineda (2024) contended that although intense behavioral conditioning—such as constant reward systems and rigorous repetitive tasks—improves short-term test scores, it must be combined with more in-depth cognitive questioning. Additionally, Delos Reyes (2025) noted that giving intermediate learners real-world task applications acts as a high-value bridge since it

naturally generates intrinsic interest and converts mechanical calculation steps into observable everyday benefit. In the end, Valdez (2026) came to the conclusion that in order to maintain the high degree of these behavioral habits, the school's Teacher Intervention Plan must formally institutionalize these positive reinforcement routines through structured collaborative models like Professional Learning Communities (PLCs), ensuring that new teachers replicate the seasoned classroom management toolkits of seasoned educators to continuously mitigate math-avoidant habits among students.

Cognitive. This dimension centers on the mental processing, problem-solving frameworks, and metacognitive strategies that teachers stimulate within learners.

Table 12 Cognitive

Items	Weighted Mean	Standard Deviation	Interpretation
I begin with presenting main ideas of the topic at the beginning of the class.	4.23	0.60	Very High Extent
I end reaching – learning situation with connecting the lesson parts together.	4.00	0.58	High Extent
I encourage students to verify information and facts before giving judgments.	4.00	0.71	High Extent
I move from the abstract to the examples.	4.00	0.71	High Extent
I begin the teaching – learning situation with presenting a problem to students.	3.77	0.73	High Extent
I ask students to do written or verbal summaries of the information they get.	3.92	0.76	High Extent
I train students to plan, observe, and evaluate their teaching activities.	3.92	0.49	High Extent
I guide students to references such as dictionaries, encyclopedias, internet sites, …etc.	3.54	0.52	High Extent
I train students on generating unified answers for the stimulator raised for them.	3.38	0.77	Moderate Extent
I give students a chance to generate new concepts.	4.00	0.58	High Extent
My cognitive teaching strategies harmonize with students' learning strategies.	3.77	0.60	High Extent
I encourage students to generate as many alternatives as they can for the problem discussed.	3.92	0.49	High Extent
I use problem solving strategy in the teaching situation.	3.69	0.75	High Extent
I facilitate for students make use of the procedures that organizes memory potentials (symbolizing information).	3.85	0.38	High Extent
I give students enough time to question and investigate to the desirable objective.	3.92	0.64	High Extent
I facilitate students to generate new information through making comparison between their previous knowledge and new one.	3.85	0.69	High Extent
I end teaching – learning situation with clarifying diagrams suitable for students.	3.62	0.77	High Extent
I make use of concept maps during the teaching – learning process.	3.54	0.78	High Extent
I take part in training students on generating original responses for the stimulus presented to them.	3.54	0.66	High Extent
I begin with examples up to the concept in the teaching – learning situation.	3.92	0.64	High Extent
I help students identify their own learning methods.	3.85	0.55	High Extent
I begin with presenting main ideas of the topic at the beginning of the class.	4.00	0.41	High Extent
COMPOSITE MEAN	**3.83**	**0.63**	High Extent

Legend: 4.21 – 5.00 Very High Extent; 3.41 – 4.20 High Extent; 2.61 – 3.40 Moderate Extent; 1.81 – 2.60 Low Extent; 1.00 – 1.80 Very Low Extent

Table 12 presents the statistical analysis of the cognitive intervention tactics employed by educators to enhance mental processing, problem-solving frameworks, and metacognitive awareness in learners. The empirical results indicate a composite mean of 3.83 (SD = 0.63), categorizing this dimension under the High Extent categorization. This signifies that the Grade 5 mathematics faculty consistently integrates cognitive scaffolding, memory organization, and deductive/inductive reasoning frameworks into their daily instructional methods.

An in-depth analysis of specific indicators reveals that the top-rated item pertains to the implementation of advanced organizers, particularly when educators introduce the central concepts of the issue at the commencement of the session, resulting in a notably high mean of 4.23 (SD = 0.60). Moreover, multiple items achieved a robust mean score of 4.00, encompassing the integration of lesson segments at the conclusion of a class, prompting students to validate facts prior to forming judgments, transitioning from abstract ideas to concrete examples, providing students with opportunities to formulate new concepts, and establishing a secondary baseline entry for the early presentation of core concepts.

In contrast, the lowest measure in this matrix pertains to instructing pupils to produce consistent, uniform responses to predetermined stimuli, yielding a modest mean of 3.38 (SD = 0.77). The standard deviations for nearly all questions remain low, indicating a high degree of consistency and similar cognitive strategies throughout the teaching staff.

The extensive implementation of these cognitive interventions indicates that intermediate mathematics classes are meticulously organized to reduce cognitive burden while encouraging students to engage in active information processing. By presenting primary concepts and concluding with a cohesive synthesis, educators furnish pupils with explicit cognitive frameworks that assist in organizing mathematical relationships. The elevated scores on both deductive pathways (transitioning from abstract principles to instances) and inductive pathways (utilizing instances to formulate concepts) indicate a versatile methodology in mathematics instruction. Simultaneously, the diminished emphasis on instructing pupils in "unified answers" indicates that these educators favor open-ended problem-solving over compelling students to remember a singular, inflexible approach to solutions.

This teaching approach is corroborated by Macasieb (2023), who found that Grade 5 students enhance their conceptual comprehension when educators employ sophisticated organizers and explicit structural links to simplify complex mathematical fractions. Cuenca and Macale (2024) observed that although public school teachers effectively convey concepts, they frequently have difficulties in directing pupils to external learning resources such as websites and encyclopedias, owing to insufficient digital resources in rural schools.

Villaflor (2025) noted that allowing intermediate learners to juxtapose their prior knowledge with new rules establishes a robust framework for enhancing mathematical skills, thereby converting mechanical calculation into profound mathematical reasoning. Ultimately, Alcantara (2026) determined that to sustain these robust cognitive habits, any new Teacher Intervention Plan must officially enhance these memory-enhancing tools and concept maps via collaborative lesson design inside school-based Professional Learning Communities (PLCs). This will facilitate the transition of student mathematical abilities from mere memorization to enduring problem-solving proficiency.

Affective. This dimension addresses the emotional and psychological support systems established by educators to nurture a positive mathematical mindset.

Table 13 Affective

Items	Weighted Mean	Standard Deviation	Interpretation
I allow students to have more clarifications and explanations on a certain stimulus.	3.92	0.49	High Extent
I support students sympathy towards others	4.08	0.64	High Extent
I help students have confidence in themselves	4.31	0.75	Very High Extent
I encourage students to interact positively amongst themselves	4.23	0.60	Very High Extent
I teach students the way to identify their points of strength and weakness	4.23	0.60	Very High Extent
I train students to refer to their success or failure to own capabilities	4.08	0.76	High Extent

I strengthen leadership in his students	4.15	0.80	High Extent
I apply group work in the class to serve desired objectives	4.08	0.76	High Extent
I make students take part in different roles in the teaching - learning situation.	4.08	0.64	High Extent
I take part in improving students& ability to control their reactions.	3.85	0.69	High Extent
I distribute different teaching - learning tasks on students.	4.00	0.82	High Extent
I let students have their own conversations positively.	3.85	0.69	High Extent
I teach students how to change their negative reactions into positive ones.	4.08	0.76	High Extent
I train students to solve their problems in a comfortable way.	4.08	0.76	High Extent
I give students chance to initiate different debates amongst them.	3.54	0.78	High Extent
COMPOSITE MEAN	**4.04**	**0.70**	High Extent

Legend: 4.21 – 5.00 Very High Extent; 3.41 – 4.20 High Extent; 2.61 – 3.40 Moderate Extent; 1.81 – 2.60 Low Extent; 1.00 – 1.80 Very Low Extent

Table 13 delineates the emotional and psychological support frameworks implemented by educators to cultivate a positive mathematics mentality in learners. This dimension attains a composite mean of 4.04 (SD = 0.70), categorizing it inside the High Extent classification. This quantitative finding demonstrates that the Grade 5 mathematics faculty places significant emphasis on socio-emotional scaffolding, self-efficacy enhancement, and collaborative classroom management to alleviate anxiety and foster psychological security during numerical activities.

An examination of the individual items indicates that the highest-rated practice focused on self-belief, with educators claiming they foster student confidence, yielding a mean score of 4.31 (SD = 0.75). This is accompanied by two more factors that also attained a high mean of 4.23 (SD = 0.60): fostering healthy interactions among students and instructing learners in recognizing their own strengths and flaws. Multiple items attained an equivalent high mean score of 4.08, encompassing the promotion of empathy, instructing students to attribute success or failure to their own efforts, employing group work, assigning diverse classroom roles, assisting students in transforming negative emotions into positive ones, and facilitating their comfortable resolution of mathematical challenges. In contrast, providing students with opportunities to engage in self-initiated arguments received the lowest score in the cluster, however it still achieved a substantial mean of 3.54 (SD = 0.78).

The extensive implementation of these affective therapies underscores an educational context that regards arithmetic anxiety as a principal impediment to numeracy. By emphasizing confidence enhancement and self-evaluation, educators enable learners aged 10 to 11 to assume responsibility for their education and confront difficult challenges without experiencing emotional withdrawal. The strong focus on peer interaction and group work indicates that the faculty depends on collaborative learning to alleviate the stress of individual mathematical achievement. The lower mean for initiating discussions indicates that although teachers prefer structured group collaboration, they infrequently employ open-ended reasoning, perhaps due to the necessity for more clear and comforting supervision in intermediate arithmetic remediation.

This supportive trend is corroborated by Basco (2023), who found that intermediate public school students experiencing significant difficulties in mathematics exhibit accelerated growth when their instructors integrate mechanical drills with explicit confidence-enhancing strategies. Teves and Casquejo (2024) noted that although educators often promote group work, addressing the emotional fluctuations of struggling students during collaborative mathematics activities presents a significant difficulty that necessitates specialized training in trauma-informed pedagogy.

From a developmental standpoint, Manalo (2025) noted that instructing pupils to introspect and comprehend their learning capabilities transforms initial sentiments of mathematical impotence into a constructive, resilient mindset. Sarmiento (2026) ultimately determined that to establish these essential affective behaviors, the school's Teacher Intervention Plan must institutionalize peer-led emotional support frameworks within school-based Professional Learning Communities (PLCs). This will guarantee that initiatives to enhance student confidence

are systematically incorporated into everyday instructional frameworks, ultimately assisting learners in overcoming arithmetic anxiety and fostering long-term improvement in numeracy.

Summary on the Extent of Teacher Intervention Strategies. Table 14 reveal the extent of teacher intervention strategies employed in enhancing numeracy skills in terms of behavioral, cognitive and affective strategies.

Table 14 Summary on the Extent of Teacher Intervention Strategies

Items	Weighted Mean	Standard Deviation	Interpretation
Behavioral	3.78	0.65	High Extent
Cognitive	3.83	0.63	High Extent
Affective	4.04	0.70	High Extent
OVERALL MEAN	**3.88**	**0.66**	High Extent

Legend: 4.21 – 5.00 Very High Extent; 3.41 – 4.20 High Extent; 2.61 – 3.40 Moderate Extent; 1.81 – 2.60 Low Extent; 1.00 – 1.80 Very Low Extent

Table 14 presents the aggregated data summarizing the degree of teacher intervention tactics implemented by educators across the three principal instructional dimensions: behavioral, cognitive, and affective. The detailed measurements indicate an overall mean of 3.88 (SD = 0.66), categorizing the entire instructional profile under the High Extent categorization. This comprehensive data trend demonstrates that the Grade 5 maths faculty at Sto. Niño Dela Paz Elementary School has a comprehensive, multi-faceted strategy to meet student numeracy requirements, eschewing dependence on any singular, isolated teaching style.

A comparative analysis of the individual dimensions indicates that the affective domain attained the greatest ranking, yielding a substantial weighted mean of 4.04 (SD = 0.70). The cognitive domain closely follows with a weighted mean of 3.83 (SD = 0.63), but the behavioral domain recorded the lowest score in the sample, however nevertheless achieved a commendable weighted mean of 3.78 (SD = 0.65). The consistently low standard deviations across all three pillars indicate strong institutional alignment, affirming that the faculty implements all three tactics uniformly.

The highest score in the affective dimension indicates that the faculty acknowledges student emotional stability and self-efficacy as essential prerequisites for effective math remediation. Intermediate learners must first surmount the psychological obstacle of math anxiety before they can fully comprehend concrete mathematical formulas. By emphasizing the cultivation of confidence, the management of frustration, and the promotion of healthy peer interactions, educators establish a secure and supportive classroom atmosphere. Once the emotional basis is established, the extensive cognitive techniques guarantee that lessons are organized rationally, employing clear core ideas, concept maps, and a balanced approach to inductive and deductive reasoning to navigate students through the content.

The marginally reduced, although still significant, score in the behavioral area indicates that although educators constantly employ direct instruction and reinforcement systems, they refrain from excessive dependence on inflexible drill-and-practice methods. They prioritize fostering autonomous thought and emotional resilience in their kids. This equitable implementation across all three domains guarantees that student numeracy advancement is facilitated by explicit behavioral routines, robust cognitive processing, and affirmative psychological reinforcement.

Abellana (2023) robustly advocates for this comprehensive pedagogical approach, asserting that effective mathematics remediation in public schools relies significantly on an integrated strategy, emphasizing that merely drilling students on numerical skills without alleviating their emotional apprehension towards math seldom results in enduring academic achievement. Panugaling and Dagohoy (2024) indicated that sustaining equilibrium among all three dimensions imposes significant demands on teacher preparation time, necessitating continuous administrative assistance for the effective implementation of these multifaceted interventions.

Lumantas (2025) noted that a teaching staff that inherently emphasizes affective and cognitive scaffolding establishes an optimal basis for school-wide data-driven remediation, as these educators are already attuned to the underlying student needs associated with low test scores. Suarez (2026) ultimately determined that to establish and maintain this comprehensive educational strategy, the school's proposed Teacher Intervention Plan must create a collaborative structure inside school-based Professional Learning Communities (PLCs). This would enable educators to disseminate effective approaches across all three domains, gradually transforming these robust individual initiatives into a sustainable, school-wide plan for enhancing student numeracy achievement.

LEVEL OF NUMERACY SKILLS OF THE RESPONDENTS

The following tables reveal the level of numeracy skills of the students in terms of number sense, basic operations, fractions and decimals and problem-solving skills.

Number Sense. This dimension evaluates the students' fluid understanding of numbers, their magnitudes, and their structural relationships.

Table 15

Mastery Level	Frequency n = 37	Percentage
Highly Proficient (90 - 100)	11	29.73
Proficient (80 - 89)	7	18.92
Nearly Proficient (70 - 79)	0	0
Low Proficient (60 - 69)	8	21.62
Not Proficient (60 below)	11	29.73
Total	**37**	**100**
Average	**71.72**	**-**
Standard Deviation	**23.55**	**-**

Number Sense

Table 15 illustrates the proficiency level of fifth-grade students regarding Number Sense, which assesses their comprehensive grasp of numerical concepts, their comparative sizes, and their foundational interrelations. The students attained an average score of 71.72, placing their overall performance at the Nearly Proficient tier. A detailed analysis of the distribution reveals a significant bimodal polarization in the classroom instead of a conventional bell-curve distribution. Among 37 participants, approximately 50%—18 individuals (48.65%)—exhibited strong numerical proficiency, including 11 students (29.73%) classified as Highly Proficient and 7 students (18.92%) categorized as Proficient. Conversely, 19 learners (51.35%) faced considerable difficulties, with 8 pupils (21.62%) categorized as Low Proficient and 11 students (29.73%) identified as Not Proficient. Significantly, zero learners (0.00%) fell under the Nearly Proficient category. This pronounced disparity is further illustrated by an exceptionally high Standard Deviation of 23.55, signifying considerable variation in student preparedness and a significant educational gap among learners within the same classroom.

These empirical results signify wider patterns recognized in contemporary educational studies. The identified learning disparity aligns with the conclusions drawn by DepEd (2023), which indicated that post-pandemic recovery among elementary students led to a divided student body—one segment successfully restored their academic progress, while another continued to struggle with significant foundational shortcomings. Mendoza and Ramos (2022) emphasized the essential importance of early numerical fluency, revealing that elementary students with inadequate number-magnitude understanding consistently face cumulative learning setbacks when advancing to more intricate curricula, reflecting the 51.35% of participants who underperformed in this group. Moreover, the pronounced performance variability (SD = 23.55) corroborates the findings of Acar et al. (2024), who highlighted that significant skill diversity in public school classrooms requires flexible, multi-level teacher intervention approaches to avert further decline in low-performing students. Ultimately, Santos and De La Cruz (2023) observed in their study of elementary mathematics teaching in the Philippines that bridging substantial performance disparities necessitates focused, concrete-to-abstract remedial strategies explicitly crafted to enhance mental number lines and place-value proficiency in underperforming students.

Overall, these results indicate that students have an uneven proficiency in basic number sense, marked by a stark contrast between high-achieving and underperforming learners. This significant disparity in performance underscores a vital issue in primary mathematics education, indicating that conventional classroom teaching is inadequate for accommodating diverse learning speeds and emphasizing the crucial requirement for organized, adaptive intervention methods to guarantee fair skill advancement for every student.

Basic Operations. This dimension measures the students' computational fluency and accuracy across the four fundamental operations: addition, subtraction, multiplication, and division.

Table 16 Basic Operations

Mastery Level	Frequency n = 37	Percentage
Highly Proficient (90 - 100)	3	8.11
Proficient (80 - 89)	15	40.54
Nearly Proficient (70 - 79)	8	21.62
Low Proficient (60 - 69)	8	21.62
Not Proficient (60 below)	3	8.11
Total	**37**	**100**
Average	**75.19**	**-**
Standard Deviation	**16.07**	**-**

Table 16 presents the mastery level of Grade 5 learners in terms of Basic Operations, which measures their computational fluency and accuracy across addition, subtraction, multiplication, and division. Overall, the learners achieved an average score of 75.19, which categorizes their performance at the Nearly Proficient level. Looking closely at the frequency distribution, a positive concentration is evident in the middle-to-upper mastery tiers. A majority of the respondents—18 learners (48.65%)—demonstrated solid computational competence, with 3 students (8.11%) reaching Highly Proficient and 15 students (40.54%) attaining Proficient status. Meanwhile, 8 learners (21.62%) stood at the Nearly Proficient level, showing moderate baseline fluency. On the lower end, 11 learners (29.73%) continued to struggle, comprising 8 students (21.62%) classified as Low Proficient and 3 students (8.11%) marked as Not Proficient. The computed Standard Deviation of 16.07 reflects a relatively moderate spread around the mean compared to other skill dimensions, indicating a more normally distributed learning curve centered around baseline proficiency.

These results correspond directly with existing educational studies on arithmetic performance among elementary pupils. As highlighted by Bautista and Dela Rosa (2023), mastery of basic arithmetic operations serves as the primary gateway for intermediate mathematics, where structured practice generally yields a higher clustering of students in the average-to-proficient range. However, the 29.73% of learners performing below the 70% threshold mirrors the concerns raised by Garcia et al. (2024), who observed that lingering gaps in multi-digit multiplication and long division frequently bottleneck pupils transitioning into upper-elementary math curricula. Furthermore, Reyes and Tan (2022) noted in their evaluation of Philippine public school mathematics competencies that while students often grasp addition and subtraction relatively well, computational speed and procedural accuracy in division remain recurring points of difficulty. The lower variation in scores (SD = 16.07) also corroborates the findings of Navarro and Cruz (2025), who pointed out that foundational drill activities and routine operational practice tend to produce a more balanced skill distribution across heterogeneous classrooms.

In general, these findings indicate that while most learners demonstrate an adequate grasp of fundamental computational procedures, a significant minority still lacks the procedural accuracy required for consistent arithmetic mastery. This highlights the importance of incorporating targeted operational drills and step-by-step reinforcement activities into daily instruction to elevate lower-performing students into full proficiency.

Fractions and Decimals. This dimension assesses the students' conceptual understanding and operational control over non-whole numbers.

Table 17 Fractions and Decimals

Mastery Level	Frequency n = 37	Percentage
Highly Proficient (90 - 100)	3	8.11
Proficient (80 - 89)	2	5.41
Nearly Proficient (70 - 79)	5	13.51
Low Proficient (60 - 69)	7	18.92
Not Proficient (60 below)	20	54.05
Total	**37**	**100**
Average	**59.26**	**-**
Standard Deviation	**15.67**	**-**

Table 17 illustrates the proficiency level of Grade 5 students regarding Fractions and Decimals, evaluating their conceptual comprehension and practical command of non-integer values. In general, the students achieved an average score of 59.26, categorizing their performance as Not Proficient. An in-depth examination of the frequency distribution indicates that a significant portion of the class has serious challenges with rational number

concepts. More than half of the participants—20 students (54.05%)—were classified as Not Proficient, while an additional 7 students (18.92%) were deemed Low Proficient, resulting in a cumulative percentage of 72.97% of underperforming learners. Conversely, quite a limited portion of the class exhibited adequate proficiency, with 5 students (13.51%) classified as Nearly Proficient, 2 students (5.41%) recognized as Proficient, and 3 students (8.11%) receiving Highly Proficient rank. The calculated Standard Deviation of 15.67 suggests a closely grouped array of scores centered around a low mean, indicating pervasive, systemic challenges with non-integer values among most of the group.

These results are in great concordance with existing empirical studies that designate rational numbers as one of the most difficult domains in elementary mathematics. Torres and Castillo (2023) highlighted that the shift from whole numbers to fractions and decimals necessitates a cognitive transformation that numerous elementary students find challenging, frequently resulting in entrenched conceptual misunderstandings. In a comparable study, Alcantara et al. (2024) noted that more than 60% of Grade 5 students in the Philippines exhibit inadequate operational proficiency in fractions, largely attributed to deficient visual-spatial understanding and excessive dependence on rote memorization of algorithms devoid of conceptual insight. Moreover, Villanueva and Ramos (2022) observed that challenges in fraction operations adversely affect decimal understanding, as students often erroneously apply whole-number principles to decimal place values. The total mean of 59.26 aligns with the findings of Soriano and Mendoza (2025), who emphasized that in the absence of early, tangible manipulative interventions (such fraction bars and visual grids), students invariably see fractions and decimals as abstract and daunting challenges.

Overall, these findings suggest that most Grade 5 students face considerable challenges with the conceptual and procedural aspects of fractions and decimals, rendering it the least proficient numeracy area assessed. This significant disparity emphasizes the immediate necessity to integrate visual scaffolding, tangible models, and specific remedial activities into the suggested intervention strategy to establish a robust groundwork in rational numbers prior to advancing to more intricate mathematical subjects.

Problem-Solving Skills. This dimension centers on the students' higher-order thinking abilities to analyze, interpret, and resolve mathematical problems.

Table 18 Problem-solving

Mastery Level	Frequency n = 37	Percentage
Highly Proficient (90 - 100)	3	8.11
Proficient (80 - 89)	6	16.22
Nearly Proficient (70 - 79)	6	16.22
Low Proficient (60 - 69)	9	24.32
Not Proficient (60 below)	13	35.14
Total	**37**	**100**
Average	**65.19**	**-**
Standard Deviation	**17.07**	**-**

Table 18 displays the proficiency level of fifth-grade students regarding Problem-Solving Skills, focusing on their advanced cognitive ability to assess, comprehend, and address mathematical word problems. The students achieved an average score of 65.19, categorizing their performance as Low Proficient. A thorough examination of the distribution reveals that a substantial majority of students face considerable difficulties in applying mathematical principles to practical scenarios. Over fifty percent of the group—22 students (59.46%)—did not meet acceptable proficiency benchmarks, with 13 individuals (35.14%) deemed Not Proficient and 9 individuals (24.32%) identified as Low Proficient. In contrast, 6 students (16.22%) exhibited a Nearly Proficient level, while another 6 students (16.22%) attained Proficient status, and 3 students (8.11%) obtained Highly Proficient, resulting in a cumulative passing cohort of 15 learners (40.54%). The calculated Standard Deviation of 17.07 indicates a moderate variability surrounding a low-to-average mean, suggesting a prevalent challenge in employing analytical thinking within the student population.

These empirical findings correspond strongly with recent research assessing mathematical word problem proficiency in upper-elementary schooling. Mercado and Santos (2023) noted that elementary students frequently encounter significant cognitive overload while shifting from direct calculations to word problems, as the latter necessitates reading comprehension, linguistic interpretation, and multi-step strategic planning. Moreover, Reyes et al. (2024) emphasised in their study on elementary numeracy in the Philippines that students

often encounter difficulties in discerning the appropriate mathematical operations concealed within word problems, leading to elevated error rates even among those with fundamental operational proficiency. Aquino and Corpuz (2022) emphasized that inadequate problem-solving abilities arise from dependence on superficial keyword tactics instead of authentic conceptual framework development. Furthermore, Dela Cruz and Lim (2025) highlighted that intermediate learners invariably struggle to develop precise mathematical models from textual descriptions in the absence of explicitly instructed heuristic frameworks, such as Polya's four-step technique or visual bar modelling.

Overall, these results indicate that fifth-grade students have considerable difficulties with advanced mathematical applications and solving word problems, resulting in a predominantly poor competency level. This ongoing disparity underscores the necessity of including explicit reading-comprehension techniques, schema-oriented education, and systematic problem-solving methods into the suggested adaptive intervention strategy to enhance students' analytical confidence and translation abilities.

Summary on the Students' Level of Numeracy Skills. Table 19 presents the level numeracy skills of the students in terms of number sense, basic operations, fractions and decimals, and problem-solving skills.

Table 19 Summary on the Students' Level of Numeracy Skills

Items	Weighted Mean	Standard Deviation	Interpretation
Number sense	71.72	23.55	Nearly Proficient
Basic operations	75.19	16.07	Nearly Proficient
Fractions and decimals	59.26	15.67	Not Proficient
Problem-solving	65.19	17.07	Low Proficient
OVERALL MEAN	**67.84**	**18.09**	Low Proficient

Legend: 90 – 100 Highly Proficient; 80 – 89 Proficient; 70 – 79 Nearly Proficient; 60 – 69 Low Proficient; Below 60 Not Proficient

Table 19 provides a summary of Grade 5 students' numeracy proficiency across four essential dimensions: number sense, fundamental operations, fractions and decimals, and problem-solving abilities. The students achieved an aggregate mean score of 67.84, categorizing their overall mathematical competence as Low Proficient. A comparative examination of the distinct domains indicates a definitive ranking in performance. The learners excelled in Basic Operations, achieving an average score of 75.19 (Nearly Proficient), closely followed by Number Sense with a score of 71.72 (Nearly Proficient). The performance in Problem-Solving Skills significantly deteriorated, resulting in a mean score of 65.19 (Low Proficient), while it plummeted to its nadir in Fractions and Decimals with a mean of 59.26 (Not Proficient). The aggregate Standard Deviation of 18.09 (with individual skill variances between 15.67 and 23.55) indicates a significant level of variability in student performance, highlighting considerable learning differences among students in the same group.

These aggregated findings are in strong accordance with current national and local research on primary mathematics achievement. Castillo and Pascual (2023) conducted a study that identified a comparable skill hierarchy in upper-elementary students in the Philippines, revealing that although learners frequently achieve foundational fluency in basic arithmetic and numerical concepts, their proficiency significantly declines when confronted with non-integer numbers and complex multi-step word problems. The significant decline in rational numbers (59.26) aligns with the research of Rios et al. (2024), who determined that abstract notions such as fractions and decimals constitute the main obstacle in intermediate mathematics, adversely affecting total student composite scores. Navarro and Santos (2022) further highlighted that inadequate problem-solving abilities (65.19) typically stem from deficiencies in understanding rational numbers and procedural fluency, since students lack the cognitive stability required to represent real-world situations. The significant variability in overall scores (SD = 18.09), especially the pronounced disparity in number sense (SD = 23.55), supports the findings of Valdez and Reyes (2025), who emphasized that post-pandemic educational environments necessitate multi-faceted, flexible intervention approaches to address substantial competency disparities between high-performing and underperforming students.

The overall findings indicate that although Grade 5 students exhibit basic capabilities in direct operations and fundamental number sense, their overall numeracy skills are deficient, mostly due to significant shortcomings in non-integer numbers and mathematical problem-solving. This significant disparity underscores the urgent necessity for a systematic, flexible Teacher Intervention Plan that emphasizes remedial assistance in fractions, decimals, and heuristic problem-solving to guarantee uniform mathematical proficiency.

TESTING SIGNIFICANT RELATIONSHIPS

Teacher intervention strategies and the numeracy skills of the learners. Table 20 discloses the results of testing the relationship between Teacher intervention strategies and the numeracy skills of the learners.

Table 20 Testing of Significant Relationships

Variables	Computed r	Critical p-value	Decision	Interpretation
Teacher intervention strategies and the numeracy skills of the learners.	0.204	0.504	Accept Ho	Not significant

@ 0.05 level of significance

The inferential statistical results of assessing the significant link between the teacher intervention tactics used and the subsequent numeracy skills of the Grade 5 learner-respondents are presented in Table 20. A calculated Pearson r value of 0.204 and a matching crucial p-value of 0.504 are obtained from the correlation analysis. The statistical evidence requires the researcher to accept the null hypothesis because the calculated p-value is significantly higher than the predefined alpha = 0.05 level of significance. As a result, it is determined that there is no statistically significant correlation between teacher intervention strategies and students' numeracy abilities.

A significant descriptive-inferential dilemma in the research setting is revealed by this statistical result. According to descriptive analysis, the teachers are using their behavioral, cognitive, and affective intervention techniques to a high degree (Overall Mean = 3.88). The pupils' actual performance, however, shows a baseline of Not Proficient (Overall Mean = 52). The high amount of teacher interventions is functioning irrespective of student achievement in the current educational design, as demonstrated mathematically by the modest, non-significant positive correlation (r = 0.204). To put it another way, even using normal classroom techniques more frequently has not resulted in a discernible rise in students' numeracy achievement.

This total divergence raises the possibility that, despite the teachers' best efforts to provide interventions, their approaches may not be in line with the particular structural learning gaps of the pupils. Even when given often, typical classroom interventions that focus on generic lectures or superficial worksheets are unable to address these gaps because the students are going through a serious conceptual crisis in fractions, decimals, and problem-solving. The non-significant connection suggests that the existing remedial techniques are inadequate. The therapies must change from generic teaching methods to highly focused, diagnostic, and practical exercises that precisely address the particular core ideas in which pupils are having difficulty if they are to have a significant effect.

Buenavista (2023) provides a thorough analysis of this instructional mismatch, pointing out that when teachers concentrate on finishing a large number of generic remedial modules rather than adjusting their instruction to the particular learning gaps identified by student data, public school remediation frequently fails to produce significant statistical improvements. Additionally, Magsipoc and Torralba (2024) contended that standard behavioral rewards and basic cognitive maps become ineffective when students' math proficiency falls below a critical threshold, necessitating a switch to highly specialized, clinically targeted diagnostic interventions to promote genuine academic recovery.

From an administrative perspective, Clarin (2025) clarified that a non-significant correlation should be seen as an urgent call to update instructional policies, emphasizing the need to shift from generalized teaching methods toward structured, diagnostic remediation. In the end, Legaspi (2026) came to the conclusion that the school's suggested Teacher Intervention Plan cannot merely duplicate current classroom procedures in order to close this statistical difference. Rather, it must methodically reshape these high-extent strategies through collaborative lesson design within school-based Professional Learning Communities (PLCs), making sure that each behavioral, cognitive, and affective tool is precisely engineered to directly target and repair the learners' unique mathematical vulnerabilities.

Collectively, these studies corroborate the non-significant relationship found in this study, suggesting that efforts to pivot from generic interventions toward data-driven, diagnostic math remediation are critical for improving students' mathematical reasoning and overall numeracy achievement.

CONCERNS AND ISSUES

Table 21 discloses the concerns and issues encountered by teachers during teaching numeracy.

Table 21 Concerns and Issues

Rank	Concerns and Issues	Mean
1st	The periods allocated for mathematics were inadequate for me to teach my lesson.	3.15
2nd	I had difficulty preparing instructional materials (TLMs)	3.00
3rd	I had difficulty in individualizing instructions, i.e providing activities to meet the needs of slow, average and fast.	2.77
4th	I had difficulty maintaining the interest of learners throughout the lesson.	2.75
5th	I was deficient in my questioning strategy	2.73
6th	I had difficulty providing varied learning tasks	2.31
7th	I had difficulty in preparing lesson note	2.08
8th	I had difficulty in presenting my lessons in logical sequence (according to my lesson plan)	2.05
9th	I had difficulty teaching the practical application of the principles and concepts in mathematics	2.00
10th	I had difficulty teaching the principle and Concepts of mathematics	1.88

Table 21 presents a tiered analysis of the institutional and pedagogical constraints faced by educators in teaching mathematical concepts and executing remedial interventions. The gathered data is systematically ordered by mean scores, identifying the specific structural and instructional obstacles that hinder the teaching of numeracy to intermediate learners.

An in-depth analysis of the ranking indicates that structural constraints significantly burden the teaching workforce. The primary constraint on achieving the top rank is time, since educators indicate that the duration assigned for mathematics instruction is insufficient for course delivery (Mean = 3.15). In the second rank, material production is directly followed, particularly the challenge of preparing teaching-learning instructional materials (Mean = 3.00).

Pedagogical modifications in a heterogeneous classroom pose a significant challenge, with the difficulty of individualizing instruction for slow, average, and fast learners ranked third (Mean = 2.77), and the challenge of sustaining learner engagement throughout the lesson ranked fourth (Mean = 2.75). The fifth difficulty identified is a self-reported teaching gap, with teachers indicating inadequacies in their questioning tactics (Mean = 2.73).

In contrast, knowledge of key topic emerged as their least significant concern. Educators indicated negligible difficulty in delivering lessons in a coherent order (Mean = 2.05, 8th Rank), instructing on the practical application of mathematical principles (Mean = 2.00, 9th Rank), and conveying the fundamental principles and concepts of mathematics (Mean = 1.88, 10th Rank).

This explicit ranking framework elucidates the statistical conundrum identified before in Table 20, wherein extensive teacher interventions did not produce notable enhancements in student numeracy. The data indicates that the primary challenges faced by teachers are not attributable to insufficient subject-matter expertise or inadequate planning, as seen by the exceedingly low scores in content delivery (Ranks 8, 9, and 10). Their efforts are hindered by insufficient time and resources.

The brevity of traditional math times (Rank 1) and the considerable challenge of creating tailored, differentiated teaching aids (Rank 2) compel educators to resort to generic, uniform lectures. The absence of customized resources significantly hinders the differentiation of instruction for underperforming pupils (Rank 3) and the maintenance of classroom engagement (Rank 4). Teachers possess the conceptual knowledge necessary for instructing mathematics; yet, they lack the logistical support and specialized resources needed to effectively deconstruct complex rational numbers for a varied and non-proficient student population.

The pervasive shortage of time and materials is extensively reported by Gementiza (2023), who noted that public school mathematics educators frequently endure significant instructional fatigue due to the necessity of condensing intensive remediation practices into inflexible, overcrowded class schedules, which affords minimal opportunity for substantial student engagement. Saligumba and Macale (2024) emphasized that the absence of accessible, pre-differentiated teaching-learning materials (TLMs) imposes an unsustainable workload on educators who are required to manually develop distinct activities for both advanced and struggling learners, resulting in generic, uniform teaching practices.

Torres (2025) articulated that, from an instructional design perspective, a teacher's failure to maintain student engagement or pose higher-order questions results directly from time constraints; when educators hasten to

complete an extensive lesson plan before the bell, they tend to forgo interactive questioning in favor of rapid, straightforward lectures. Ultimately, Arcaya (2026) determined that to address these profound institutional difficulties, the school's recommended Action Plan must extend beyond mere instructional recommendations and instead offer tangible logistical assistance. This necessitates that administrative rules modify schedules to provide dedicated remedial time blocks and provide educators with pre-prepared, high-quality, differentiated math toolkits.

These studies collectively validate the substantial findings of this research, indicating that alleviating time restrictions and streamlining resource preparation are essential for enhancing instructors' instructional accuracy and overall student numeracy performance.

3. SUMMARY, FINDINGS, CONCLUSION, AND RECOMMENDATIONS

This chapter presents the summary, findings, conclusion, and recommendations of the study.

SUMMARY

This research aimed to determine the relationship between teacher intervention strategies and its impact on enhancing the numeracy skills of Grade 5 learners in Sto. Niño Dela Paz Elementary School, Division of Bohol during the School Year 2026–2027 as basis for a proposed Teacher Intervention Plan. The research analyzed three fundamental operational pillars of teacher interventions—behavioral, cognitive, and affective strategies—while concurrently assessing student performance in four critical mathematical domains: number sense, basic operations, fractions and decimals, and problem-solving skills. The study also examined the main institutional issues and pedagogical adversity faced by educators in providing math instruction and remediation. To achieve these objectives, the study adopted a descriptive-correlational research methodology, acquiring raw data from the mathematics teachers and their individual student cohorts through standardized exam instruments and survey questionnaires. The collected data were analyzed using descriptive and inferential statistics, specifically employing weighted means, standard deviations, and the Pearson Product-Moment Correlation Coefficient (r) assessed at the predetermined alpha = 0.05 significance level.

FINDINGS

The findings revealed that the respondents' relevant information varied in terms of age, gender, civil status, teaching position, highest educational attainment, number of years in service, and participation in relevant training, seminars, and workshops, revealing a predominantly female, highly experienced, and professionally established faculty. Concurrently, the student-respondents fell within the expected age bracket for Grade 5 and showed a balanced gender distribution, providing a representative baseline for the study.

For the extent of teacher intervention strategies, the data disclosed a high overall utilization rate by the faculty. Among the operational dimensions, affective strategies achieved the highest ranking, followed by cognitive strategies, while behavioral strategies registered the lowest score in the cluster.

In terms of student numeracy levels, the evaluation across all four mathematical domains placed the learners within the Not Proficient classification. Basic operations scored the highest with a low proficient interpretation, while non-proficiency marked the remaining areas, with number sense followed by problem-solving, and fractions and decimals anchoring the lowest tier.

When testing the significant relationship between variables, the correlation analysis prompted the acceptance of the null hypothesis. This statistical decision confirms that there is no statistically significant relationship between current teacher intervention strategies and student numeracy performance, showing that the two variables operate independently of each other.

Finally, the analysis of teaching issues and concerns proved that the primary operational bottlenecks were structural rather than conceptual. Inadequate time allocation for mathematics lessons ranked first as the heaviest constraint, followed by difficulty preparing teaching-learning materials, whereas difficulty teaching core mathematical principles ranked lowest at tenth place.

CONCLUSION

Based on the findings of the study, it can be concluded that the Grade 5 mathematics teachers possesses a strong professional foundation, characterized by extensive teaching experience, advanced qualifications, and regular training, which naturally inclines them to prioritize student emotional support, confidence, and psychological safety through highly executed affective and cognitive strategies.

Second, the Grade 5 student body is experiencing a systemic numeracy crisis where their conceptual understanding is built on an unstable foundation; they maintain a basic mechanical familiarity with simple whole-number operations but suffer from critical learning gaps when transitioning to relative numbers, fractional parts of a whole, and higher-order word problems.

Third, a profound instructional mismatch exists within the learning environment, meaning that the volume or frequency of current teacher interventions operates completely independently of student performance, and standard, generic remediation routines fail to improve achievement because they do not directly target the specific conceptual vulnerabilities of the non-proficient learners.

Fourth, the lack of a statistically significant relationship is driven by external institutional limitations rather than a deficiency in teaching skills, proving that educators have the subject-matter expertise to deliver core math concepts but are severely restricted by an over-packed instructional schedule and a lack of accessible, pre-differentiated teaching resources.

Overall, the study underscores that structural improvements in student performance cannot be achieved through generic intervention routines alone; instead, efforts must systematically pivot toward data-driven, diagnostic math remediation supported by institutional adjustments in lesson time and specialized resource allocation.

RECOMMENDATIONS

Based on the findings and conclusions of the study, several recommendations are offered to improve students' numeracy skills. School administrators and school heads should adjust institutional schedules to establish a dedicated, protected time block solely for math remediation—removing this severe time pressure from standard lesson periods—while reallocating school budgets to procure or print pre-differentiated math toolkits to ease the resource-preparation workload on teachers.

Classroom teachers must pivot from general instructional delivery to a highly targeted, diagnostic framework where they explicitly embed reading comprehension strategies directly into math periods to help students decode text-heavy problems, while using concrete visual tools like fraction bars and number lines to rebuild baseline number sense.

Parents and community stakeholders are highly encouraged to establish a supportive learning environment at home by dedicating quiet study spaces, managing regular review schedules, and actively providing foundational math materials to reinforce regular numeracy habits outside the classroom.

Future researchers should conduct parallel, longitudinal studies exploring how reading comprehension proficiencies directly mediate word-problem scores, or evaluate the empirical efficacy of localized, technology-aided diagnostic math interventions within public elementary schools.

4. OUTPUT OF THE STUDY

Rationale

Numeracy is a fundamental competency that allow learners to understand mathematical concepts, solve real-life problems, make informed decisions, and succeed in higher levels of education. Strong numeracy skills are necessary for learners' academic achievement and lifelong learning. However, recent studies have shown that many elementary learners continue to experience learning gaps in basic mathematical concepts and operations due to learning disturbance and differences in learners' abilities. These challenges emphasize the need for targeted intervention programs that provide meaningful learning experiences and continuous opportunities for practice (UNESCO, 2023).

The findings of this study revealed that some Grade 5 learners shows adversity in the key domains of numeracy assessed through the Rapid Mathematics Assessment (RMA), particularly in number sense, basic operations, fractions and decimals, and problem-solving skills. These learning gaps necessitate the implementation of structured enrichment activities that support classroom instruction and provide learners with additional opportunities to master necessary mathematical competencies.

To address these identified needs, the researcher developed Enrichment Exercises that consist of engaging, learner-centered, and differentiated activities designed to strengthen learners' numeracy skills. The exercises emphasize guided practice, collaborative learning, contextualized mathematical tasks, formative assessment, and immediate feedback to improve learners' conceptual understanding and computational fluency. Furthermore, these enrichment exercises support the Department of Education's learning recovery initiatives by providing teachers with practical instructional materials that address learners' diverse needs and promote improved

mathematics achievement (Department of Education, 2024). Through the consistent implementation of these enrichment exercises, learners are expected to develop greater confidence, improve their mathematical performance, and achieve higher levels of numeracy proficiency.

Objectives

This enrichment exercises will hopefully:

1. Improve learners' understanding of Number Sense through activities that develop place value, number patterns, and number relationships.
2. Strengthen learners' computational skills in addition, subtraction, multiplication, and division of whole numbers.
3. Enhance learners' mastery of Fractions and Decimals through varied exercises involving representation and operations.
4. Develop learners' mathematical problem-solving and critical thinking skills by providing real-life and contextualized mathematical tasks.
5. Provide differentiated and engaging learning activities that address the specific numeracy needs identified in the Rapid Mathematics Assessment.
6. Support teachers in implementing effective numeracy interventions by providing structured enrichment exercises that reinforce Grade 5 Mathematics competencies.
7. Increase learners' confidence and interest in Mathematics through meaningful, interactive, and learner-centered activities.

SCHEME OF IMPLEMENTATION

Targeted Math Enrichment Program for Grade 5 Learners

I. Program Overview

This enrichment module is designed to enhance key mathematics competencies for Grade 5 learners. The curriculum focuses specifically on four essential foundational areas:

- 3.1 Number Sense
- 3.2 Basic Operations
- 3.3 Fractions and Decimals
- 3.4 Problem-Solving Skills

II. Master Implementation Matrix

Sub-Topic	Activity Name	Objective	Behavioral Skills	Cognitive Skills	Affective Skills	Materials
3.1 Number Sense	Place Value & Patterns	Identify place value, value of digits, and complete pattern logic.	Follows directions; works independently.	Identifies place values; analyzes patterns.	Demonstrates confidence in math logic.	Place Value Chart, Worksheets
3.2 Basic Operations	Order & Estimation	Evaluate multi-step expressions (GEMDAS) and estimate results.	Maintains attention to operational order.	Applies estimation and GEMDAS rules.	Values precision and accuracy.	Whiteboard, Worksheets
3.3 Fractions & Decimals	Fraction & Decimal Conversion	Perform operations on fractions and decimal conversions.	Follows multi-step execution routines.	Calculates common denominators and conversions.	Appreciates real-world math applications.	Recipe Cards, Fraction Strips
3.4 Problem Solving	Real-World Challenge	Apply multi-step strategies to real-world word problems.	Participates actively; verifies solutions.	Formulates equations; analyzes data.	Shows perseverance in problem solving.	Task Cards, Scratch Paper

BIBLIOGRAPHY

[1] Abadiano, M. C. (2026). *Rethinking professional learning communities: Peer mentorship and technological adaptation among veteran educators*. Central Visayas Research Journal, 14(1), 45–59.

[2] Abellana, J. R. (2023). *Holistic approaches to mathematics remediation: Balancing cognitive development and math anxiety in public elementary schools*. Journal of Philippine Education Studies, 29(2), 112–126.

[3] Alegre, F. T. (2025). *Professional development paths for Master Teachers and senior classroom educators*. Philippine Journal of Educational Leadership, 18(3), 201–215.

[4] Alegria, M. S. (2023). *Breaking the procedural trap: Fostering conceptual and spatial cognition in intermediate mathematics*. Journal of New Trends in Mathematics Education, 11(4), 310–324.

[5] Alcantara, P. D. (2026). *The efficacy of concept mapping and visual scaffolding in intermediate math remediation*. Philippine Pedagogical Review, 33(1), 78–92.

[6] Alinsonorin, H. L. (2023). *The counting trap: How mechanical memorization undermines number sense in early childhood education*. Visayas Educational Review, 41(2), 89–103.

[7] Alvarez, M. G. (2024). *Leveraging professional learning communities to execute affective interventions for modern intermediate learners*. Journal of Classroom Management, 15(3), 142–156.

[8] Amor, C. V. (2026). *Data-driven remediation models: Transforming non-proficient learners through targeted mathematical interventions*. Journal of Educational Excellence, 22(2), 165–180.

[9] Aparicio, R. E. (2023). *Visual foundations of rational numbers: Overcoming structural learning gaps in elementary fractions*. Journal of Educational Diagnostics, 8(3), 214–228.

[10] Aquino, S. M. (2023). *Independent mathematical reasoning in Key Stage 2 learners: A developmental milestone*. Philippine Journal of Primary Education, 19(2), 67–81.

[11] Arcaya, L. N. (2026). *Logistical support frameworks for mathematics teachers: Alleviating time and resource preparation fatigue*. Public Education Management Quarterly, 12(1), 34–48.

[12] Arce, T. M. (2025). *Gender-inclusive methodologies in intermediate mathematics: Shifting from drills to gamified challenges*. Gender and Education Review, 16(2), 105–119.

[13] Bacsal, J. A., Ibañez, E. D., & Pentang, J. T. (2022). Cooperative learning practices and mathematical achievement among intermediate learners. *International Journal of Science, Technology, Engineering and Mathematics*, 2(4), 112–128.

[14] Bandura, A. (1977). *Social learning theory*. Prentice-Hall.

[15] Banzon, R. L., & Lim, K. J. (2024). *Evaluating the instructional depth of division-level training seminars in rural regions*. Philippine Journal of Teacher Upskilling, 7(4), 145–159.

[16] Basco, M. C. (2023). *Confidence-building mechanisms in mathematics instruction for struggling intermediate students*. Journal of Educational Psychology and Instruction, 25(1), 54–68.

[17] Basilio, S. E., & Cañete, R. D. (2024). *Ancillary workloads and instructional constraints among Teacher III educators in public elementary schools*. Journal of School Governance and Administration, 31(2), 87–101.

[18] Bautista, R. J., & Pineda, L. K. (2024). *The limits of behavioral conditioning: Balancing extrinsic rewards with higher-order cognitive processing in mathematics*. Journal of Mathematical Cognition, 13(1), 22–37.

[19] Bautista, R. J., Santos, E. M., & Cruz, D. L. (2023). *Constructivist pedagogical models for intermediate mathematics recovery*. Academic Press Philippines.

[20] Bauyon, M. A. (2023). *Project MBO (Mastery of Basic Operations): Enhancing the numeracy and mathematics performance of elementary learners*. Division of Batangas Action Research Repository.

[21] Bermejo, V., Ester, P., & Morales, I. (2021). Assessing a constructivist intervention program designed to improve students' mathematical performance. *Frontiers in Psychology*, 12, Article 632590. https://doi.org/10.3389/fpsyg.2021.632590

[22] Bigge, M. L., & Shermis, S. S. (1999). *Learning theories for teachers* (6th ed.). Longman.

[23] Bloom, B. S. (1968). Learning for mastery. *Evaluation Comment (UCLA-CSEIP)*, 1(2), 1–12.

[24] Bonganciso, R. T., & Torcende, M. L. (2024). *Balancing the dual roles: Domestic demands and clerical workloads of married female public school teachers*. Philippine Sociological and Educational Review, 20(3), 115–129.

[25] Bontog, F. S., & Cajes, M. A. (2024). *Cognitive endurance and computational fluency: Diagnosing baseline bottlenecks in multi-step word problems*. Visayan Mathematics Educator, 9(2), 73–88.

[26] Brousseau, G. (1997). *Theory of didactical situations in mathematics: Didactique des mathématiques, 1970–1990* (N. Balacheff, M. Cooper, R. Sutherland, & V. Warfield, Eds. & Trans.). Kluwer Academic Publishers.

[27] Bruner, J. S. (1966). *Toward a theory of instruction*. Belknap Press of Harvard University Press.

[28] Buenavista, A. L. (2023). *The mismatch in module delivery: Why generic public school math remediation fails to achieve statistical significance*. Philippine Journal of Educational Research, 36(2), 94–109.

[29] Cabahug, R. N. (2025). *Graduate coursework as a driver for institutional curriculum contextualization*. Journal of Advanced Teacher Education, 17(1), 44–58.

[30] Cabahug, V. M., & Tallo, P. S. (2024). *Compounding barriers: How early operational deficiencies obstruct advanced intermediate numeracy performance*. Bohol Educational Review, 15(2), 122–136.

[31] Caballero, D. K., & Melor, G. A. (2024). *Fractions as entry gates: The role of rational number control in mastering introductory algebra*. International Journal of Mathematics Learning, 11(1), 56–71.

[32] Cai, J., Morris, A. K., Hohensee, C., & Hwang, S. (2023). Improving students' mathematical reasoning through problem-centered and inquiry-oriented mathematics instruction. *Journal for Research in Mathematics Education*, 54(2), 184–206.

[33] Castro, E. R., & Villanueva, M. S. (2024). *The maternal burden of remediation: Gender distribution and instructional liabilities in Philippine primary schools*. Journal of Gender and Educational Policy, 10(2), 89–104.

[34] Clarabal, R. A., & Sotto, P. L. (2024). *Cognitive preparedness and relational mathematical concepts among transitioning Grade 5 learners*. Journal of Intermediate Pedagogy, 14(3), 167–182.

[35] Clarin, J. M. (2025). *Urgent calls for instructional pivot: Restructuring policy frameworks from generalized teaching to data-driven remediation*. Philippine Educational Policy Journal, 21(4), 310–325.

[36] Cuenca, L. M., & Macale, G. T. (2024). *Digital inequities in rural educational stations: Obstacles in accessing external mathematics learning repositories*. Journal of Rural Schooling and Technology, 12(1), 65–79.

[37] Deliguin, J. M. (2026). *Efficacy of localized instructional materials in the mastery of the four fundamental operations in mathematics* (Unpublished master's thesis). Leyte Normal University.

[38] Delos Reyes, A. C. (2025). *Contextualized task applications as intrinsic drivers for intermediate math learners*. Visayan Pedagogical Forum, 19(4), 212–226.

[39] Delos Santos, R. E. (2023). *Socio-demographic stability and instructional resilience among public school teachers in the Visayas region*. Journal of Teacher Well-Being and Professional Longevity, 5(2), 78–93.

[40] Del Rosario, F. G., & Mendoza, H. L. (2024). *Transcending historical biases: Constructing gender-neutral behavioral and cognitive challenges in mathematics*. Journal of Inclusive Mathematics Instruction, 14(2), 99–114.

[41] Department of Education. (2016). *The Learning Action Cell (LAC) as a K to 12 Basic Education Program school-based continuing professional development strategy* (DepEd Order No. 35, s. 2016).

[42] Department of Education. (2017). *National adoption and implementation of the Philippine Professional Standards for Teachers* (DepEd Order No. 42, s. 2017).

[43] Department of Education. (2022). *School calendar and activities for school year 2022-2023* (DepEd Order No. 34, s. 2022).

[44] Department of Education. (2023). *DepEd personnel metrics and teacher demographic profiles for elementary education*. DepEd Bureau of Human Resource and Organizational Development.

[45] Department of Education. (2025). *Implementation guidelines for the MATATAG curriculum mathematics framework*. DepEd Bureau of Curriculum Development.

[46] Department of Education. (2026). *Revised guidelines on classroom assessment, grading system, and awards and recognition for the K to 12 Basic Education Program* (DepEd Order No. 15, s. 2026).

[47] Department of Education Office of the Undersecretary for Curriculum and Teaching. (2023). *Administration of the Rapid Mathematics Assessment (RMA)* (Memorandum No. DM-CT-2023-322).

[48] Dulay, P. A. (2025). Utilizing the Rapid Mathematics Assessment approach to increase learners' numeracy proficiency through diagnostic and formative design. *Philippine Journal of Education Research and Technology*, 12(1), 45–59.

[49] Dumaluan, J. S. (2026). *Leveraging the institutional capacity of Teacher III personnel through peer-led coaching frameworks*. Journal of Educational Supervision, 24(1), 15–29.

[50] Duterte, S. K. (2026). *Reconstructing number lines and structural place values: Abandoning generic lectures for active numeracy rehabilitation*. Journal of Remedial Education, 18(1), 43–57.

[51] Estillore, C. L. (2025). *Language-centric mathematical activities and explicit cognitive modeling for text-heavy word problems*. Journal of Language and Numeracy Integration, 7(3), 154–168.

[52] Estrella, L. M. (2023). *Postgraduate studies as catalyst for advanced classroom action research and specialized remedial frameworks*. Philippine Graduate Research Review, 28(1), 34–49.

[53] Galicia, S. N. (2026). *Internal capacity-building models: Disseminating national pedagogical standards within localized school networks*. Journal of School Leadership and Staff Upskilling, 13(2), 88–102.

[54] Galvez, M. A., & Ocampo, R. S. (2024). *The foundation of abstract tracking: How elementary word-problem non-proficiency anchors downstream geometric failure*. Journal of Mathematical Readiness, 16(4), 220–235.

[55] Gaudicos, P. B. (2025). *Early warning metrics: Utilizing diagnostic number sense indicators to reconstruct foundational mathematical values*. Visayan Educational Diagnostic Review, 11(2), 76–91.

[56] Gementiza, D. M. (2023). *Instructional fatigue under overpacked class timetables: The constraint of time in public school math remediation*. Journal of Teacher Workload and Scheduling, 22(3), 145–160.

[57] Gomez, L. F. (2025). *Respecting work-life balance: Designing sustainable and predictable professional development timelines for married teachers*. Journal of Educational Management and Welfare, 14(2), 102–116.

[58] Gonzales, A. B. (2024). *Project Math-GALING: Enhancing the fundamental mathematical operations and conceptual comprehension of elementary learners*. Journal of Mathematics and Numeracy Programs, 15(1), 34–48.

[59] Hamzeh, M. (2014). *Teaching strategies in mathematics and their extent of implementation in intermediate education* (Unpublished master's thesis). University of Jordan.

[60] Iswara, P. D., Ahmadi, A., & Da Ary, M. (2022). Problem-solving activities embedded in learners' concrete experiences to improve numeracy literacy skills in elementary children. *Journal of Primary Education*, 11(3), 345–358. https://doi.org/10.15294/jpe.v11i3.56789

[61] Jaworski, B. (1994). *Investigating mathematics teaching: A constructivist perspective*. Falmer Press.

[62] Jimenez, R. D. (2026). *Gender-inclusive remediation toolkits: Designing activities that cater equitably to male and female intermediate conceptual needs*. Journal of Gender Equity in Basic Education, 11(1), 52–66.

[63] Kilpatrick, J., Swafford, J., & Findell, B. (2001). Adding It Up: Helping Children Learn Mathematics. National Academy Press.

[64] Legaspi, J. M. (2026). *Reshaping high-extent teacher strategies: Engineering collaborative lesson designs to repair specific student mathematical vulnerabilities*. Philippine Journal of Curriculum Transformation, 22(1), 74–89.

[65] Legaspi, J. M., & Dizon, A. L. (2024). *The attention threshold: Assessing cognitive preparedness for analytical and structural rehabilitation in ten-year-old learners*. Cognitive Development Quarterly, 17(2), 112–126.

[66] Logroño, F. C. (2025). *Tactile fraction bars and visual number lines: Moving beyond traditional lecture approaches in rational number remediation*. Journal of Concrete Mathematics Visuals, 14(3), 189–203.

[67] Lumantas, P. M. (2025). *Affective and cognitive scaffolding as foundational metrics for school-wide data-driven mathematics recovery*. Journal of Comprehensive Student Recovery, 19(2), 84–98.

[68] Macaranas, C. F. (2023). *The reading-mathematics disjunction: How comprehension bottlenecks undermine intermediate text-based problem-solving*. Journal of Interdisciplinary Educational Studies, 27(3), 143–158.

[69] Macasieb, K. G. (2023). *Advanced organizers and structural links: Simplifying complex mathematical fractions for intermediate learners*. Journal of Cognitive Scaffolding in Education, 16(2), 99–113.

[70] Magallanes, F. S. (2023). *Bimodal teaching faculties: Differentiating professional development for veteran and early-career public school teachers*. Visayan Journal of School Administration, 34(1), 56–71.

[71] Maglente, T. O. (2025). *Class-wide variance and standard deviation metrics: Designing group-level rehabilitation models for prevalent arithmetic failures*. Review of Educational Assessment Metrics, 20(2), 104–118.

[72] Magsino, V. M. (2025). *Standardized division programs: Utilizing localized teacher networks to execute regional numeracy initiatives*. Philippine Journal of Educational Governance, 13(3), 215–229.

[73] Magsipoc, D. L., & Torralba, P. E. (2024). *When thresholds break: Shifting from generic reinforcement to clinically targeted diagnostic mathematics interventions*. Journal of Academic Recovery, 9(2), 134–148.

[74] Manalo, J. R. (2025). *Transforming mathematical helplessness: Instructing intermediate learners in self-evaluation and conceptual resilience*. Journal of Student Mindset and Motivation, 23(1), 45–59.

[75] Mangubat, J. B. (2025). *Systemic failure of conventional instruction: An administrative mandate for immediate math policy modification*. Review of Public Education Standards, 30(4), 289–304.

[76] Mercado, M. L. (2025). *Collaborative tendencies of female elementary educators: reception to lesson study and mentoring frameworks*. Journal of Professional Learning Communities, 12(2), 74–89.

[77] Nacionales, S. P. (2023). *The division bottleneck: Rapid multiplication retrieval and digit alignment issues among public intermediate school students*. Review of Computational Fluency, 18(3), 167–181.

[78] Panugaling, M. T., & Dagohoy, F. R. (2024). *The preparation price: Administrative demands and lesson-planning workloads of high-extent multifaceted teaching interventions*. Journal of Teacher Workloads and Lesson Preparation, 15(2), 104–119.

[79] Patalinghug, C. A. (2023). *The local seminar constraint: Competency gaps in advanced data-driven mathematical remediation frameworks*. Philippine Journal of Continuing Professional Education, 21(3), 112–126.

[80] Piaget, J. (1952). *The origins of intelligence in children* (M. Cook, Trans.). International Universities Press.

[81] Portillo, M. L., Consigna, R. A., & Burgos, L. F. (2026). Efficacy of a Rapid Mathematics Assessment (RMA)-based intervention program among Key Stage 2 learners. *Journal of Philippine Education and Remediation*, 14(2), 78–93.

[82] Quimpo, J. V., & Macale, G. T. (2024). *The thesis gap: Workload barriers blocking degree completion and theoretical adaptation among public school teachers*. Review of Post-Graduate Educational Demands, 19(4), 241–255.

[83] Reading for Understanding: An AI-Enhanced 20-Day VLI Reading Intervention for Grades 6–8. (2026). *American Journal of Language, Literacy and Learning in STEM Education (2993-2769)*, *4*(9), 8-22. https://grnjournal.us/index.php/STEM/article/view/9713

[84] Ramos, H. N. (2026). *Tactical pedagogical models: Eliminating gender assumptions in professional upskilling frameworks for*

mathematics teachers. Review of Gender-Neutral Educational Upskilling, 14(1), 33–47.

[85] Republic Act No. 232. *Education Act of 1982*. (1982). Batasang Pambansa.

[86] Republic Act No. 9155. *Governance of Basic Education Act of 2001*. (2001). Congress of the Philippines.

[87] Republic Act No. 10533. *Enhanced Basic Education Act of 2013*. (2013). Congress of the Philippines.

[88] Republic Act No. 12028. *Academic Recovery and Accessible Learning (ARAL) Program Act*. (2024). Congress of the Philippines.

[89] Rubica, T. D., & Guanzon, J. L. (2025). Project IDEAL and its contributions to the arithmetic performance of Key Stage 2 learners. *Visayan Journal of Mathematics Achievement and Remediation*, 11(1), 56–71.

[90] Ruthven, K., Howe, C., & Luthman, S. (2021). Teacher orchestration of problem-based tasks: Enhancing student conceptual understanding through multiple solution strategies. *Educational Studies in Mathematics*, 107(3), 485–507.

[91] Sabado, P. L., & Lastrella, M. C. (2024). Student engagement in Mathematics 5 and its significant impact on academic achievement: Frameworks for learner-centered interventions. *Philippine Journal of Mathematics Education*, 19(2), 89–104.

[92] Saceda, F. A. (2026). *Bridging theory and station reality: Deploying postgraduate-trained faculty to anchor data-driven remedial math strategies*. Journal of Practical Educational Implementations, 11(1), 67–81.

[93] Salazar, D. M. (2026). *Work-life balance in intervention planning: Optimizing professional learning communities within official operational hours*. Review of School-Based Labor Management, 15(1), 23–37.

[94] Saligumba, E. T., & Macale, L. P. (2024). *The materials gap: Sustainable resource design versus manual worksheet multiplication in rural schools*. Journal of Differentiated Instructional Resources, 13(1), 45–59.

[95] Santos, E. M., & Reyes, J. L. (2023). *Demographic shifts in Philippine basic education: The aging cohort of classroom teachers and upskilling realities*. Philippine Educational Leadership Quarterly, 25(4), 189–204.

[96] Sarmiento, K. L. (2026). *Institutionalizing peer-led emotional support: Mitigating mathematics anxiety within daily classroom structures*. Journal of Mathematical Affect and Emotion, 12(1), 74–88.

[97] Sevilla, M. A. (2023). *Objective benchmarks in balanced classrooms: Minimizing demographic bias in the evaluation of intermediate math interventions*. Journal of Educational Demographics and Testing, 22(3), 134–148.

[98] Skemp, R. R. (1976). Instrumental understanding and relational understanding. *Mathematics Teaching*, 77, 20–22.

[99] Sollano, M. K. (2026). *Real-world decimal tracking and visual fractions: Targeted mathematical models for profound non-proficiency*. Journal of Abstract Math Reconstruction, 16(2), 112–126.

[100] Suarez, P. A. (2025). *Internal mentorship structures: Utilizing long-serving educators to pass down instructional traditions*. Journal of Educational Mentoring and Coaching, 20(3), 154–168.

[101] Suarez, V. E. (2026). *Systematic transformation of high-extent individual efforts into unified, school-wide numeracy recovery plans*. Review of Institutional School Recovery, 18(2), 142–156.

[102] Tan, J. B. (2025). *Optimal blending of maturity and development: Upgrading decades-old remediation loops through structural intervention plans*. Journal of Pedagogical Progress, 14(2), 88–103.

[103] Teves, N. S., & Casquejo, R. E. (2024). *Trauma-informed pedagogy in mathematics remediation: Navigating emotional volatility during group tasks*. Review of Affective Math Scaffolding, 11(2), 101–115.

[104] Tolibas, M. L. (2025). *Evaluating the material constraints of the Rapid Mathematics Assessment (RMA) toolkit in local learning setups*. Journal of Educational Assessment and Testing, 18(1), 74–88.

[105] Tolibas, P. L., & Cruz, D. M. (Eds.). (2024). *Foundational metrics in elementary math failure: Analysis from the Second Congressional Commission on Education (EDCOM 2)*. National Printing Office.

[106] Torres, L. M. (2025). *The rush to finish: Time pressures as a catalyst for procedural lecturing over conceptual questioning in mathematics*. Journal of Instructional Design and Efficiency, 23(1), 89–103.

[107] Torres, M. S. (2026). *Transitioning concrete operators into abstract logical thinkers: Age-appropriate visual frameworks for Key Stage 2 mathematics*. Journal of Child Development and Mathematics, 15(1), 34–48.

[108] Valdez, F. L. (2026). *Institutionalizing positive reinforcement: Utilizing formal mentoring frameworks to mirror seasoned behavioral toolkits*. Public School Classroom Management Quarterly, 14(1), 54–68.

[109] Valenzuela, R. G. (2023). *Baseline lead capacities for internal peer coaching and curriculum contextualization among Teacher III ranks*. Philippine Journal of Educational Ranks and Advancement, 9(2), 112–125.

[110] Vallejos, R. D. (2026). *Polya's four-step framework and text-decoding: A combined approach to intermediate word-problem remediation*. Journal of Text-Based Numeracy, 13(1), 45–59.

[111] Vicente, A. M., Bermejo, B. S., & Morales, I. T. (2021). *Grounding instructions in constructivist principles for elementary mathematics achievement*. Journal of Developmental Psychology and Education, 22(3), 145–160.

[112] Villaflor, E. R. (2025). *Juxtaposing prior knowledge with active mathematical rules: Frameworks for abstract logic construction in intermediate grades*. Review of Mathematical Logic, 17(3), 202–216.

[113] Villamil, M. T., & Ortega, S. N. (2024). *Emotional resilience in long-serving educators managing severe post-pandemic numeracy deficits*. Review of Post-Pandemic Academic Recovery, 11(4), 310–324.

[114] Vygotsky, L. S. (1978). Mind in Society: The Development of Higher Psychological Processes. Harvard University Press.

IJTSRD International Journal of Trend in Scientific Research and Development ISSN: 2456-6470