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IMPLEMENTATION OF THE NATIONAL MATHEMATICS PROGRAM (NMP) AND PRIMARY LEARNERS' NUMERACY SKILL LEVELS: FOUNDATION FOR AN ENHANCED MATHEMATICS INSTRUCTIONAL PROGRAM

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ABSTRACT

The National Mathematics Program (NMP) was designed to improve the numeracy skills of primary learners across the Philippines, focusing on enhancing the effectiveness of mathematics instruction in elementary schools. Despite its widespread implementation, there remains a need to assess the actual impact of the NMP on primary learners' numeracy skill levels, particularly in the Masinloc District, Schools Division of Zambales. This study aimed to determine the implementation of the NMP and the numeracy skill levels of primary learners in Masinloc District during the School Year 2024-2025. Using a quantitative-descriptive research design, the study surveyed 108 elementary teachers and 513 primary learners from five public elementary schools. A validated researcher-designed questionnaire was employed to collect data. The findings revealed that most teachers were in the 30-39 age range, predominantly female, assigned to Grade 3, and held a Master's degree. Teachers moderately implemented the NMP in terms of instructional materials, teaching strategies, learner engagement, and professional development. Regarding learners' numeracy skills, the results showed that they were moderately skilled in addition and subtraction but only slightly skilled in multiplication and division. No significant differences were found between the perceived implementation of the NMP and teacher demographics, such as age, sex, teaching position, and educational attainment. The study also revealed a weak, non-significant positive correlation between the implementation of the NMP and learners' numeracy skill levels. The study recommends the enhancement of mathematics instructional programs to improve both the implementation of the NMP and the numeracy skill levels of primary learners, contributing to the ongoing refinement of mathematics education in the region.

Keywords: National Mathematics Program, Numeracy Skills, Elementary Teachers, Primary Learners, Enhanced Mathematics Instructional Program

1. INTRODUCTION

Understanding the impact of the NMP on primary learners' numeracy skill levels is crucial for developing effective instructional strategies. This study aims to explore teachers' implementation of the program and its influence on learner outcomes in mathematics. By analyzing these implementations, the research seeks to identify areas for improvement and establish a foundation for enhancing the mathematics instructional program. Addressing these insights will support the creation of more targeted and effective teaching practices to boost numeracy skills among primary learners.

Understanding the impact of the NMP on primary learners' numeracy skill levels is essential for developing effective instructional strategies. Research reveals that teachers'

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implementations play a critical role in evaluating the effectiveness of the program and identifying areas for improvement. Casing and Casing (2024) demonstrated the positive influence of incorporating modern educational resources like Khan Academy on middle school learners' mathematics achievements, highlighting the importance of integrating advanced tools into elementary curricula. Similarly, Llurag et al. (2024) pointed out the mixed outcomes of the K to 12 curriculum in the Philippines, emphasizing challenges such as inadequate resources and the need for continuous professional development. These studies collectively suggest that providing adequate resources and professional support can significantly enhance teachers' implementation of the NMP, ultimately improving learners' numeracy skills.

Furthermore, other studies underscore the critical role of specific instructional strategies and the utilization of instructional materials in optimizing mathematics education. Cerbito (2024) found that targeted exercises like the 50-30-20 method notably improved learners' problem-solving skills and comprehension, while Ronquillo III (2024) identified the beneficial effects of technology integration and personalized learning plans. These findings are echoed by Tuanaya (2024), who highlighted the importance of diverse instructional materials in teacher preparation and mathematics instruction. Barker et al. (2024) similarly advocated for well-designed upskilling initiatives that include the use of tailored materials to address gaps in teaching practices. Collectively, these studies emphasize that both effective teaching strategies and the strategic use of instructional materials are essential for the successful implementation of the NMP and the enhancement of numeracy skill levels among primary learners.

Based on the reviewed studies, a research gap existed in understanding how teachers' implementation of the NMP specifically affected primary learners' numeracy skill levels, particularly in diverse educational contexts. While previous research explored various factors influencing numeracy skills, such as the integration of instructional materials, technological tools, and innovative teaching strategies, there was limited focus on the direct impact of the NMP on primary learners' outcomes. Additionally, studies often concentrated on specific interventions or strategies without thoroughly examining the broader programmatic implementation and its implications for numeracy development. This study aimed to fill this gap by analyzing teachers' implementation of the NMP and its influence on learner outcomes, providing insights that informed an enhanced instructional program tailored to improve numeracy skills among primary learners.

2. STATEMENT OF THE PROBLEM

This study determined the implementation of the NMP and primary learners' numeracy skill levels in Masinloc District, Schools Division of Zambales during the School Year 2024-2025. Specifically, it aimed to answer these questions:

1. How may the profile of the teachers be described in terms of:

- 1.1. age;
- 1.2. sex;

1.3. grade assignment;

- 1.4. teaching position;
- 1.5. length of service; and
- 1.6. highest educational attainment?

2. How may the teachers describe the implementation of the NMP in terms of:

2.1. utilization of instructional materials;

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2.2. teaching strategies and methods;

2.3. learners' engagement and participation; and

2.4. professional development and training?

3. How may the primary learners' numeracy skill levels be described in terms of:

3.1. addition of numbers;

3.2. subtraction of numbers;

3.3. multiplication of numbers; and

3.4. division of numbers?

4. Is there a significant difference between the perceived implementation of the NMP and respondents' profile when grouped accordingly?

5. Is there a significant correlation between perceived implementation of the NMP of teachers and their primary learners' numeracy skill levels?

6. What enhancement program can be proposed for mathematics instruction to improve the implementation of the NMP and primary learners' numeracy skill levels.

3. METHODS AND MATERIALS

This study determined the implementation of the NMP and primary learners' numeracy skill levels in Masinloc District, Schools Division of Zambales during the School Year 2024-2025. A quantitative-descriptive research design was employed, with data collected, classified, summarized, and analyzed using percentages and means. The study involved 108 public elementary school teachers and 513 Grade 3 learners came from five public elementary schools, utilizing total population sampling to involve all public elementary school teachers and Grade 3 learners. A researcher-designed questionnaire served as the primary data collection tool, targeting dimensions of the implementation of the NMP and primary grade learners' numeracy skill levels. The instrument demonstrated excellent reliability, as confirmed by Cronbach's Alpha values for the implementation of the NMP of teachers ($\alpha = 0.95$) and the numeracy skill levels of the learners ($\alpha = 0.87$). Statistical analyses, including the Kruskal-Wallis Test, and Spearman Rho Correlation, were used to test the study's hypotheses.

4. RESULTS

Statement of the Problem No. 1: *How may the profile of the teachers be described in terms of age, sex, grade assignment, teaching position, length of service, and highest educational attainment?*

Age

Table 1

Profile of the Teachers in terms of Age

| Age | Frequency | Percentage |
|------------------------|-----------|------------|
| 60 years old and above | 6 | 5.56 |
| 50-59 years old | 18 | 16.67 |
| 40-49 years old | 29 | 26.85 |
| 30-39 years old | 38 | 35.19 |
| 20-29 years old | 17 | 15.74 |

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As shown in Table 1, the profile of the teachers in terms of age. As reflected in the table, 5.56% of the teachers were in the 60 years old and above bracket, 16.67% were in the 50-59 years old bracket, 26.85% were in the 40-49 years old bracket, 35.19% were in the 30-39 years old bracket, and 15.74% were in the 20-29 years old bracket.

This implies that the teachers in the study predominantly belong to older age groups, indicating a workforce with potentially significant teaching experience. The presence of 5.57% of teachers aged 60 and above suggests a few highly seasoned teachers who may bring valuable insights and knowledge to the teaching environment. The 16.67% of respondents in the 50-59 age range further reinforces the experience level, as this age group typically has a solid background in teaching practices. The 26.85% of teachers in the 40-49 bracket and 35.19% in the 30-39 bracket reflect a mix of mid-career teachers who may offer a blend of traditional and contemporary teaching methodologies. Lastly, the 15.74% of teachers aged 20-29 indicates a smaller representation of younger, possibly less experienced teachers, which may point to limited generational diversity among the teachers. This age distribution implies a teaching workforce rich in experience, with fewer younger teachers to potentially infuse new perspectives and recent pedagogical innovations into the instructional environment.

In the present study, the teachers' age distribution shows a strong representation of older age groups, with the majority being between 30-49 years old, which suggests a workforce with significant teaching experience. This aligns with Monteiro and Forlin (2021), which found that a more experienced teaching workforce contributes to the implementation of effective educational practices and knowledge transfer.

Sex

Table 2

| Profile | of the | Teachers | in term | s of Sex |
|---------|--------|----------|---------|----------|
| | | | | |

| Sex | Frequency | Percentage |
|--------|-----------|------------|
| Male | 12 | 11.11 |
| Female | 96 | 88.89 |

As shown in Table 2, the profile of the teachers in terms of sex. As reflected in the table, 11.11% of the teachers were males and 88.89% were females.

This implies that the teaching workforce represented in the study is predominantly female, with 88.89% of the teachers being women compared to only 11.11% who are men. This significant gender imbalance suggests that teaching in this context may be a female-dominated profession, potentially reflecting broader trends in education where women often outnumber men in teaching roles, especially at the primary and secondary levels. This composition may also influence the teaching approaches, classroom dynamics, and potentially the mentoring styles available to learners.

The present study, showing a significant gender imbalance with 88.89% female and only 11.11% male teachers, reflect a broader trend in education where female teachers outnumber male teachers, especially in primary education. Kundu (2022) also highlighted similar gender imbalances in the teaching workforce, emphasizing the dominance of women in the profession, which can shape educational practices and classroom environments. This gender disparity, as noted in both studies, could influence teaching styles and mentorship, with a greater representation

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of female teachers potentially fostering different classroom dynamics compared to a more genderdiverse teaching staff.

Grade Assignment

Table 3

Profile of the Teachers in terms of Grade Assignment

| Grade Level | Frequency | Percentage |
|--------------|-----------|------------|
| Grade 3 | 39 | 36.11 |
| Grade 2 | 29 | 26.85 |
| Grade 1 | 22 | 20.37 |
| Kindergarten | 18 | 16.67 |

As shown in Table 3, the profile of the teachers in terms of grade assignment. As reflected in the table, 36.11% of the teachers were handling grade 3, 26.85% of the teachers were handling grade 2, 20.37% of the teachers were handling grade 1, and 16.67% of the learners were handling kindergarten.

This implies that the teachers in the study are more frequently assigned to higher primary grades, with the largest percentage (36.11%) teaching Grade 3, followed by Grade 2 at 26.85%, and fewer teachers assigned to Grade 1 and kindergarten at 20.37% and 16.67%, respectively. This distribution suggests a focus on supporting learners in the later stages of early primary education, potentially reflecting a strategic prioritization where the development of foundational skills in literacy, numeracy, and comprehension is critical as learners progress. It may also imply a reduced focus on the youngest learners, which could impact the allocation of resources, training, and support for early childhood education among the respondents.

The present study revealed that the majority of teachers are assigned to higher primary grades, with the largest percentage teaching Grade 3 (36.11%), followed by Grade 2 (26.85%), and fewer teaching Grade 1 (20.37%) and Kindergarten (16.67%). This trend is consistent with Nash et al. (2021), which found that teachers in primary education tend to be more frequently assigned to middle grades, where foundational academic skills are reinforced. The distribution of teacher assignments in both studies highlights a strategic focus on upper primary grades, potentially reflecting a greater need for experienced teachers in stages where literacy and numeracy development are most critical.

Teaching Position

Table 4

Profile of the Teachers in terms of Teaching Position

| Teaching Position | Frequency | Percentage |
|---------------------|-----------|------------|
| Master Teacher II | 6 | 5.56 |
| Master Teacher I | 9 | 8.33 |
| Teacher III | 35 | 32.41 |
| Teacher II | 21 | 19.44 |
| Teacher I | 20 | 18.52 |
| Contractual Teacher | 17 | 15.74 |

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As shown in Table 4, the profile of the teachers in terms of teaching position. As reflected in the table, 5.56% of the teachers were Master Teacher II, 8.33% were Master Teacher I, 32.41% were Teacher III, 19.44% were Teacher II, 18.52% were Teacher I, and 15.74% were contractual teachers.

This implies that the majority of teachers hold regular teaching positions rather than master teacher roles, with the largest percentages being Teacher III (32.41%) and Teacher II (19.44%), while only a small portion are in senior positions like Master Teacher I (8.33%) and Master Teacher II (5.56%). The presence of 15.74% contractual teachers suggests some reliance on non-permanent teaching staff, which may reflect staffing needs or limited permanent placements. This distribution indicates that most teachers are still advancing through the ranks, with fewer in leadership or specialized instructional roles, potentially impacting the availability of mentorship and advanced pedagogical expertise for colleagues and learners alike.

The present study indicated that most teachers hold regular teaching positions, with the largest percentages being Teacher III (32.41%) and Teacher II (19.44%), and fewer in senior roles like Master Teacher I (8.33%) and Master Teacher II (5.56%). This aligns with Sibanda and Amin (2021), which highlighted a similar pattern of fewer teachers occupying senior teaching positions, suggesting ongoing professional progression and limited mentorship opportunities. Both studies emphasize the potential impact of a lower proportion of master teachers on the dissemination of advanced instructional practices and the professional development of peers within the teaching workforce.

Length of Service

Table 5

| Length of Service | Frequency | Percentage |
|--------------------|-----------|------------|
| 40 years and above | 3 | 2.78 |
| 30-39 years | 11 | 10.19 |
| 20-29 years | 20 | 18.52 |
| 10-19 years | 35 | 32.41 |
| 9 years and below | 39 | 36.11 |

Profile of the Teachers in terms of the Length of Service

As shown in Table 5, the profile of teachers in terms of the length of service. As reflected in the table, 2.78% of the teachers were in the 40 years and above bracket, 10.19% in the 30-39 years bracket, 18.52% in the 20-29 years bracket, 32.41% in the 10-19 years bracket, and 36.11% in the 9 years and below bracket.

This implies that the teachers are relatively newer to the profession, with the largest group (36.11%) having less than 9 years of service, followed by 32.41% with 10-19 years of experience. A smaller portion has 20 years or more, with only 2.78% serving 40 years or more. This distribution suggests a predominantly early- to mid-career teaching population, which may bring fresh perspectives and adaptability but potentially less cumulative experience and institutional knowledge compared to veteran teachers. This pattern may also reflect recent hiring trends and workforce renewal within the educational system.

The present study showed that the majority of teachers are in the early to mid-career stages, with 36.11% having less than 9 years of service and 32.41% with 10-19 years, while only 2.78%

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have served 40 years or more. Similarly, Williams III, (2022) observed that a significant proportion of teachers are relatively new to the profession, highlighting a trend of workforce renewal in educational institutions. Both studies suggest that while early- and mid-career teachers may introduce innovative practices and adaptability, the limited representation of veteran teachers could impact the transmission of institutional knowledge and seasoned pedagogical expertise.

Highest Educational Attainment

Table 6

Profile of the Teachers in terms of the Highest Educational Attainment

| Length of Service | Frequency | Percentage |
|--------------------|-----------|------------|
| EdD/PhD Graduate | 3 | 2.78 |
| with EdD/PhD units | 8 | 7.41 |
| MA Graduate | 36 | 33.33 |
| with MA units | 32 | 29.63 |
| Education Graduate | 29 | 26.85 |

As shown in Table 6, the profile of the teachers in terms of the highest educational attainment. As reflected in the table, 2.78% of the teachers were EdD/PhD graduates, 7.41% were with EdD/PhD units, 33.33% were MA graduates, 29.63% were with MA units, and 26.85% were education graduates.

This implies that the teachers have diverse levels of educational attainment, with a notable portion (33.33%) holding a Master's degree and 29.63% pursuing MA units, indicating a strong commitment to advanced education among some teachers. Only a small percentage (2.78%) have completed an EdD or PhD, while 7.41% are pursuing doctoral units, suggesting that few teachers have reached the highest levels of academic achievement. The presence of 26.85% with only an undergraduate degree implies a range in professional qualifications, which may impact instructional expertise and the capacity to engage in advanced pedagogical methods, potentially contributing to varied teaching practices and professional development needs.

The study indicated that while 33.33% of teachers are MA graduates and 29.63% are pursuing MA units, only 2.78% have completed an EdD or PhD, with 7.41% pursuing doctoral units. Similarly, Iqbal and Ali (2024) found a limited number of teachers attaining the highest academic qualifications, though many actively pursue advanced degrees, reflecting ongoing professional development efforts. Both studies highlight a workforce with diverse educational backgrounds, emphasizing the importance of supporting teachers in achieving higher educational attainment to enhance instructional expertise and pedagogical innovation.

Statement of the Problem No. 2: *How may the teachers describe the implementation of the NMP in terms of utilization of instructional materials, teaching strategies and methods, learners' engagement and participation, and professional development and training?*

Utilization of Instructional Materials

Table 7

Mean Rating and Interpretations of Implementation of the NMP in terms of Utilization of Instructional Materials

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| Item | Indicators | Mean Rating | Interpretation |
|------|--|----------------|---------------------------|
| 1 | I use a variety of instructional materials to cater to | 3.12 | Moderately |
| | different learning styles in my mathematics lessons. | | Implemented |
| 2 | I integrate visual aids, such as charts and diagrams, | 3.21 | Moderately |
| | to help my learners understand mathematical concepts more effectively. | | Implemented |
| 3 | I provide hands-on materials, like manipulatives and | 3.18 | Moderately |
| | math games, to reinforce mathematics skills through | | Implemented |
| | active learning. | | - |
| 4 | I update and organize my instructional materials to | 3.19 | Moderately |
| | ensure they are current and relevant to the | | Implemented |
| | curriculum. | | |
| 5 | I adapt instructional materials to meet the diverse | 3.12 | Moderately |
| | needs of my learners, including those with special | | Implemented |
| | educational needs. | | |
| 6 | I incorporate technology-based resources, such as | 3.22 | Moderately |
| | educational software and online tools, to enhance | | Implemented |
| _ | mathematical instruction. | | |
| 7 | I use real-time examples and materials to make | 3.14 | Moderately |
| | abstract mathematical concepts more tangible and | | Implemented |
| 0 | relatable for my learners. | 2.21 | |
| 8 | I design interactive activities using instructional | 3.21 | Moderately |
| | materials to promote my learner engagement and | | Implemented |
| 0 | participation in mathematics lessons. | 0.17 | |
| 9 | I assess the effectiveness of instructional materials | 3.17 | Moderately |
| | by observing my learner performance and making | | Implemented |
| 10 | aujustitients as needed. | 2 10 | Moderately |
| 10 | instructional materials that support the NMD | 3.19 | Implemented |
| | effectively. | | Implemented |
| | General Mean Rating | 3.18 | Moderately Implemented |

As shown in Table 7, the implementation of the NMP in terms of utilization of instructional materials. As reflected in the table, a majority of the teachers had the general mean rating of 3.18 or "Moderately Implemented." It was observed that, "I incorporate technology-based resources, such as educational software and online tools, to enhance mathematical instruction" had the highest mean of 3.22 equivalent to "Moderately Implemented."

This implies that the implementation of the NMP, specifically in the utilization of instructional materials, is generally at a moderate level among teachers. The highest-rated practice, incorporating technology-based resources like educational software and online tools with a mean of 3.22, suggests that while teachers are making efforts to integrate digital resources, the extent of this integration remains moderate. This moderate level of implementation could reflect factors

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such as limited access to advanced technology, varying levels of teacher proficiency with digital tools, or the need for further support and training to maximize the impact of technology on mathematics instruction.

The findings align with Mendiola and Estonanto's (2022) study, which also reported a moderate level of implementation in utilizing instructional materials for mathematics instruction. Similar to the current study's highest-rated practice of incorporating technology-based resources, Mendiola and Estonanto (2022) emphasized the potential of digital tools in enhancing mathematical comprehension. However, both studies highlight that moderate implementation persists, indicating a shared need for increased access to resources, improved teacher proficiency, and targeted training to elevate the effectiveness of instructional material utilization in mathematics education.

Teaching Strategies and Methods

Table 8

Mean Rating and Interpretations of Implementation of the NMP in terms of Teaching Strategies and Methods

| Item | Indicators | Mean Rating | Interpretation |
|------|--|----------------|---------------------------|
| 1 | I use a variety of teaching strategies to address | 3.19 | Moderately |
| | different learning styles and abilities in my mathematics lessons. | | Implemented |
| 2 | I incorporate group work and collaborative activities to encourage peer learning and problem-solving in mathematics. | 3.21 | Moderately Implemented |
| 3 | I apply step-by-step instruction to guide my learners through complex mathematical concepts and procedures. | 3.20 | Moderately Implemented |
| 4 | I utilize questioning techniques to assess my learner understanding and prompt critical thinking during mathematics lessons. | 3.18 | Moderately Implemented |
| 5 | I provide clean and concise explanations of mathematical concepts, using examples that are relevant to learners' everyday experiences. | 3.19 | Moderately Implemented |
| 6 | I incorporate formative assessments to monitor my learner progress and adjust my teaching strategies accordingly. | 3.24 | Moderately Implemented |
| 7 | I use differentiated instruction to tailor mathematical activities and support to meet the needs of my diverse learners. | 3.20 | Moderately Implemented |
| 8 | I integrate hands-on activities and manipulatives to make abstract mathematical ideas more concrete and understandable. | 3.19 | Moderately Implemented |

| | | 2 20 | Moderately |
|----|---|------|----------------------|
| | engaging and applicable to my learners' lives. | | <u>r</u> |
| | teaching to make mathematics lessons more | | Implemented |
| 10 | I apply real-world problems and scenarios in my | 3.22 | Moderately |
| | develop their verbal and cognitive skills. | | - |
| | methods when solving mathematical problems to | | Implemented |
| 9 | I encourage learners to explain their reasoning and | 3.21 | Moderately |
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As shown in Table 8, the implementation of the NMP in terms of teaching strategies and methods. As reflected in the table, a majority of the teachers had the general mean rating of 3.20 or "Moderately Implemented." It was observed that, "I incorporate formative assessments to monitor my learner progress and adjust my teaching strategies accordingly" had the highest mean of 3.24 equivalent to "Moderately Implemented."

This implies that the implementation of teaching strategies and methods within the NMP is generally moderate among the teachers, as reflected in the general mean rating of 3.20. The highest-rated practice, the use of formative assessments to monitor learner progress and adjust teaching strategies (mean of 3.24), indicates that teachers are somewhat incorporating responsive teaching practices but are not fully maximizing these strategies. This moderate level of implementation suggests that while teachers recognize the value of ongoing assessment and adaptability in instruction, they may benefit from additional resources, training, or support to enhance the effectiveness and consistency of these practices in improving learner learning outcomes in mathematics.

The findings parallel Moh'd et al. (2021) study, which also highlighted a moderate implementation level of teaching strategies and methods in mathematics instruction. Both studies identified the use of formative assessments as a relatively stronger practice, with the current study showing the highest mean, reflecting teachers' efforts to adapt their strategies based on learner progress. However, the consistent moderate ratings in both studies suggest that while foundational practices are in place, further support in professional development and instructional innovation is needed to fully optimize teaching methods and enhance learner outcomes in mathematics.

Learners' Engagement and Participation

Table 9

Mean Rating and Interpretations of Implementation of the NMP in terms of Learners' Engagement and Participation

| Item | Indicators | Mean Rating | Interpretation |
|------|--|----------------|---------------------------|
| 1 | My learners actively participate in group discussions | 3.22 | Moderately |
| | and problem-solving activities during mathematics lessons. | | Implemented |
| 2 | My learners enthusiastically engage in interactive games and hands-on activities related to mathematics. | 3.18 | Moderately Implemented |

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| | General Mean Rating | 3.20 | Implemented |
|----|--|------|-------------|
| | learning environment. | | Madavataly |
| | classroom activities, contributing to a positive | | Implemented |
| 10 | My learners feel comfortable and included in | 5.19 | Moderately |
| 10 | problems. | 2 10 | Madagatalay |
| | even when faced with challenging mathematics | | Implemented |
| 9 | understanding. My learners remain engaged and participate actively, | 3.21 | Moderately |
| | how they complete assignments and present their | | Implemented |
| 8 | My learners demonstrate creativity and choice in | 3.22 | Moderately |
| | when real-life contexts and examples are used. | | Implemented |
| 7 | My learners show interest in mathematics lessons | 3.18 | Moderately |
| | independently through discovery-based activities. | | Implemented |
| 6 | My learners explore mathematical concepts | 3.24 | Moderately |
| | their math tasks | | mplementeu |
| 5 | encouragement showing increased motivation in | 5.20 | Implemented |
| 5 | My learners respond positively to praise and | 3 20 | Moderately |
| 7 | group work in mathematics activities | 5.21 | Implemented |
| Δ | My learners collaborate with peers during pair or | 3 21 | Moderately |
| 5 | their ideas during mathematics instruction | 5.17 | Implemented |
| 3 | My learners confidently ask questions and contribute | 3 10 | Moderately |

As shown in Table 9, implementation of the NMP in terms of learners' engagement and participation. As reflected in the table, a majority of the teachers had the general mean rating of 3.20 or "Moderately Implemented." It was observed that, "My learners explore mathematical concepts independently through discovery-based activities" had the highest mean of 3.24 equivalent to "Moderately Implemented."

This implies that learner engagement and participation within the NMP are moderately implemented, as indicated by the general mean rating of 3.20. The highest-rated practice, where learners independently explore mathematical concepts through discovery-based activities (mean of 3.24), suggests that teachers are moderately fostering active learning and exploration among learners. However, this moderate level of implementation indicates that while discovery-based activities are recognized as valuable, they may not be consistently or fully integrated into classroom practices. This could imply a need for additional support, resources, or professional development to enhance teachers' ability to promote deeper, sustained engagement and independent learning in mathematics.

The findings align with Sabado and Lastrella (2024) study, which similarly reported moderate implementation levels in fostering learner engagement and participation in mathematics instruction. Both studies emphasize the potential of discovery-based activities, with the current study's highest mean rating highlighting their role in encouraging independent exploration of mathematical concepts. However, the consistently moderate ratings suggest that while active learning strategies are being utilized, there is room for improvement in consistently integrating

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these approaches, which may require targeted interventions such as enhanced teacher training and access to diverse instructional resources.

Professional Development and Training

Table 10

Mean Rating and Interpretations of Implementation of the NMP in terms of Professional Development and Training

| Item | Indicators | Mean Rating | Interpretation |
|------|--|----------------|----------------|
| 1 | I apply new teaching methods and strategies learned | 3.09 | Moderately |
| | from professional development to enhance my | | Implemented |
| | mathematics instruction. | | |
| 2 | I integrate updated assessment techniques gained | 3.24 | Moderately |
| | from training to better evaluate my learners' | | Implemented |
| _ | mathematical understanding. | | |
| 3 | I use innovative instructional materials and | 3.18 | Moderately |
| | resources introduced in professional development to | | Implemented |
| | enrich my mathematics lessons. | | |
| 4 | I implement effective classroom management | 3.22 | Moderately |
| | techniques learned from training to create a | | Implemented |
| ~ | productive learning environment for mathematics. | 2 10 | |
| 5 | I adapt my teaching approach based on the latest | 3.19 | Moderately |
| | development sessions | | Implemented |
| 6 | L design engaging and interactive mathematics | 3 73 | Moderately |
| 0 | activities inspired by new ideas from my training | 5.25 | Implemented |
| | programs | | mplemented |
| 7 | I participate in collaborative learning opportunities | 3.22 | Moderately |
| | with colleagues to share and refine the strategies | 0.22 | Implemented |
| | learned in professional development. | | |
| 8 | I use feedback and new skills from professional | 3.20 | Moderately |
| | development to address challenges and improve my | | Implemented |
| | effectiveness in teaching mathematics. | | |
| 9 | I evaluate and adjust my teaching practices based on | 3.19 | Moderately |
| | insights and techniques from recent training to better | | Implemented |
| | meet the needs of my learners. | | |
| 10 | I incorporate technology and digital tools introduced | 3.22 | Moderately |
| | in professional development to enhance the delivery | | Implemented |
| | of mathematics content. | | |
| | General Mean Rating | 3.20 | Moderately |
| | | | Implemented |

As shown in Table 10, the implementation of the NMP in terms of professional development and training. As reflected in the table, a majority of the teachers had the general

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mean rating of 3.20 or "Moderately Implemented." It was observed that, "I integrate updated assessment techniques gained from training to better evaluate my learners' mathematical understanding." had the highest mean of 3.24 equivalent to "Moderately Implemented."

This implies that professional development and training aspects of the NMP are moderately implemented, as shown by the general mean rating of 3.20. The highest-rated practice, integrating updated assessment techniques from training to evaluate learners' mathematical understanding (mean of 3.24), suggests that teachers are applying some of the new skills acquired from training sessions. However, the moderate level of implementation indicates that while training is beneficial, it may not be sufficiently frequent, in-depth, or tailored to fully impact classroom practices. This could imply a need for more comprehensive or targeted professional development to strengthen teachers' proficiency and consistency in using advanced assessment techniques to enhance mathematical learning outcomes.

The findings of this study correspond with Roesken-Winter et al. (2021) research, which similarly noted moderate implementation levels in the professional development and training components of mathematics instruction. Both studies highlight the value of updated assessment techniques, as seen in the current study's highest-rated item, which reflects teachers' efforts to apply insights from training to evaluate learners' mathematical understanding. However, the general mean rating of 3.20 indicates a moderate overall impact of professional development, underscoring the need for more frequent, comprehensive, and context-specific training programs to further enhance teachers' instructional practices and learner outcomes in mathematics.

Statement of the Problem No. 3: *How may the primary learners' numeracy skill levels be described in terms of addition of numbers, subtraction of numbers, multiplication of numbers, and division of numbers?*

| Item | Indicators | Mean Rating | Interpretation | |
|------|---------------------------|----------------|--------------------|--|
| 1 | Addition of Numbers | 3.16 | Moderately Skilled | |
| 2 | Subtraction of Numbers | 3.02 | Moderately Skilled | |
| 3 | Multiplication of Numbers | 2.74 | Slightly Skilled | |
| 4 | Division of Numbers | 2.58 | Slightly Skilled | |
| | General Mean Rating | 2.88 | Slightly Skilled | |

Table 11

Mean Rating and Interpretations of the Primary Learners' Numeracy Skill Levels

As shown in Table 11, the primary learners' numeracy skill levels. As reflected in the table, a majority of the learners had the general mean rating of 2.88 or "Slightly Skilled." It was observed that, "Addition of Numbers" had the highest mean of 3.16 equivalent to "Moderately Skilled."

This implies that the primary learners' overall numeracy skill levels are generally low, with a mean rating of 2.88 indicating that most learners are considered "Slightly Skilled." However, the higher mean rating of 3.16 for the specific skill of "Addition of Numbers," categorized as "Moderately Skilled," suggests that learners show a relatively stronger understanding and ability in this particular area. This discrepancy indicates that while some foundational numeracy skills are

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being grasped, there is a broader need for targeted interventions and support to enhance overall numeracy proficiency among learners. The results may point to a need for more comprehensive instruction and practice in various mathematical concepts to improve learners' confidence and competence in numeracy beyond basic addition.

The present findings align with O'Meara et al.'s (2024) study, which also highlighted challenges in learners' numeracy skill levels, particularly in operations beyond basic addition. Similar to O'Meara et al.'s (2024) results, this study reveals a stronger performance in "Addition of Numbers" compared to more complex operations like multiplication and division, which were rated as "Slightly Skilled." These findings emphasize the ongoing need for focused instructional strategies and interventions to build foundational mathematical skills and progressively enhance learners' competence in more advanced numeracy tasks.

Statement of the Problem No. 4: *Is there a significant difference between the perceived implementation of the NMP and respondents' profile when grouped accordingly?*

Age

 Table 12

 Difference Between the Age Groups of the Teachers

| Groups | H | df | Р | Decision |
|------------------------|------|----|------|------------------------|
| 60 years old and above | 7.32 | 4 | .120 | Accept H ₀₁ |
| 50-59 years old | | | | (Not Significant) |
| 40-49 years old | | | | |
| 30-39 years old | | | | |
| 20-29 years old | | | | |

As shown in Table 12, a Kruskal-Wallis Test was conducted to assess the difference between age groups of the teachers. The Kruskal-Wallis Test results revealed no statistically significant difference in scores between the age groups (H(4) = 7.32, p = .120) at the 5% level; thus, the null hypothesis was accepted. In conclusion, these findings suggest that age may have no effect on teachers' implementation of the NMP.

This implies that age does not significantly influence the implementation of the NMP among teachers, as indicated by the Kruskal-Wallis Test results showing no statistically significant differences in scores across the age groups (H(4) = 7.32, p = .120). The acceptance of the null hypothesis suggests that teachers of various ages are similarly engaged in implementing the program, indicating a level of consistency in teaching practices regardless of age. This finding may reflect a shared understanding of program requirements or professional development that transcends age-related differences, suggesting that factors other than age may play a more critical role in the effectiveness of program implementation.

The findings of the present study align with the results of Feng et al. (2023), which also reported no significant differences in program implementation across various demographic groups. Specifically, the current study's results demonstrate that age does not significantly influence teachers' implementation of the NMP, supporting Feng et al.'s (2023) conclusion of demographic factors having minimal impact on teaching practices. These consistent results highlight the

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potential influence of standardized training and unified program guidelines in ensuring equitable implementation across diverse age groups.

Sex

Table 13

| Difference Between the Sex | x Groups of th | e Teachers | | |
|----------------------------|----------------|------------|---|-------|
| Groups | Н | df | Р | Decis |

| Groups | H | df | P | Decision | |
|--------|-----|----|------|------------------------|--|
| Male | .37 | 1 | .541 | Accept H ₀₁ | |
| Female | | | | (Not Significant) | |

As shown in Table 13, a Kruskal-Wallis Test was conducted to assess the difference between sex groups of the teachers. The Kruskal-Wallis Test results revealed no statistically significant difference in scores between the sex groups (H(1) = .37, p = .541) at the 5% level; thus, the null hypothesis was accepted. In conclusion, these findings suggest that sex may have no effect on teachers' implementation of the NMP.

This implies that sex does not significantly affect the implementation of the NMP among teachers, as demonstrated by the Kruskal-Wallis Test results showing no statistically significant differences in scores between the sex groups (H(1) = .37, p = .541). The acceptance of the null hypothesis indicates that both male and female teachers are similarly engaged in implementing the program, suggesting a uniformity in teaching practices across genders. This finding may indicate that professional development, teaching resources, and instructional strategies are perceived and utilized similarly by teachers, regardless of sex, pointing to a broader trend of equality in the educational environment concerning the program's implementation.

The present study's findings echo those of Fatima et al. (2021), which similarly observed no significant differences in teaching practices among teachers based on demographic variables. The Kruskal-Wallis Test results indicate that sex does not significantly affect teachers' implementation of the NMP, supporting the notion of uniform engagement across male and female groups. This consistency in findings reinforces the idea that factors such as professional training and standardized program requirements contribute to equitable implementation, irrespective of sex.

Grade Assignment

| Table 14 | | | | |
|-----------------------|-----------------|------------|----------------|------------------------|
| Difference Between th | he Grade Assign | nment Grou | ips of the Tea | achers |
| Groups | Н | df | p | Decision |
| Grade 3 | 1.18 | 3 | .757 | Accept H ₀₁ |
| Grade 2 | | | | (Not Significant) |
| Grade 1 | | | | |
| Kindergarten | | | | |

As shown in Table 14, a Kruskal-Wallis Test was conducted to assess the difference between grade assignment groups of the teachers. The Kruskal-Wallis Test results revealed no statistically significant difference in scores between the grade assignment groups (H(3) = 1.18, p

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= .757) at the 5% level; thus, the null hypothesis was accepted. In conclusion, these findings suggest that grade assignments may have no effect on teachers' implementation of the NMP.

This implies that grade assignments do not significantly impact the implementation of the NMP among teachers, as indicated by the Kruskal-Wallis Test results showing no statistically significant differences in scores between the grade assignment groups (H(3) = 1.18, p = .757). The acceptance of the null hypothesis suggests that teachers, regardless of the grade levels they are assigned to, engage similarly in the implementation of the program. This finding may reflect a common approach to teaching mathematics across different grade levels, indicating that factors such as training, resources, and pedagogical strategies are uniformly applied, regardless of the grade assigned. It highlights the possibility that effective practices in implementing the program are shared among teachers of varying grade levels, contributing to a consistent educational experience for learners.

The findings of the present study align with Hunter et al. (2022), which also noted no significant differences in program implementation across demographic or professional characteristics. The Kruskal-Wallis Test results reveal that grade assignments do not significantly influence teachers' implementation of the NMP, supporting the conclusion that teaching practices are consistent across different grade levels. This consistency suggests that shared training, resources, and pedagogical strategies effectively ensure uniform program implementation, contributing to a standardized approach to mathematics instruction across grade levels.

Teaching Position

Table 15

| 4 | .448 | Accept H ₀₁ (Not Significant) |
|---|------|---|
| | | |
| | | |
| | | |

Diffe

As shown in Table 15, a Kruskal-Wallis Test was conducted to assess the difference between the teaching position groups of the teachers. The Kruskal-Wallis Test results revealed no statistically significant difference in scores between the teaching position groups (H(4) = 3.70 p =.448) at the 5% level; thus, the null hypothesis was accepted. In conclusion, these findings suggest that the teaching position may have no effect on teachers' implementation of the NMP.

This implies that the teaching position of the teachers does not significantly influence the implementation of the NMP, as demonstrated by the Kruskal-Wallis Test results showing no statistically significant differences in scores between the teaching position groups (H(4) = 3.70, p = .448). The acceptance of the null hypothesis indicates that teachers, regardless of their specific roles-such as Master Teacher or Teacher I-exhibit similar levels of engagement in implementing the program. This finding suggests that the effectiveness of the program's implementation is not contingent upon the hierarchical status of teachers, pointing to a collective

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commitment among teachers to uphold the program's standards and objectives irrespective of their teaching positions.

The present study's findings are consistent with those of Overwijk et al. (2022), which similarly observed no significant differences in program implementation across various professional roles. The Kruskal-Wallis Test results indicate that teaching position does not significantly affect teachers' implementation of the NMP, reinforcing the notion of uniformity in engagement across different hierarchical roles. This outcome highlights a shared dedication among teachers, regardless of their position, to effectively implement the program, suggesting that standardized training and resources play a pivotal role in fostering consistent teaching practices.

Length of Service

Table 16Difference Between the Length of Service Groups of the TeachersGroupsHdfpDecision40 years and above5.284.260Accept H₀₁

| 40 years and above | 5.28 | 4 | .260 | Accept H ₀₁ |
|--------------------|------|---|------|------------------------|
| 30-39 years | | | | (Not Significant) |
| 20-29 years | | | | |
| 10-19 years | | | | |
| 9 years and below | | | | |

As shown in Table 16, a Kruskal-Wallis Test was conducted to assess the difference between length of service groups of the teachers. The Kruskal-Wallis Test results revealed no statistically significant difference in scores between the length of service groups (H(4) = 5.28, p = .260) at the 5% level; thus, the null hypothesis was accepted. In conclusion, these findings suggest that length of service may have no effect on teachers' implementation of the NMP.

This implies that the length of service among teachers does not significantly affect the implementation of the NMP, as evidenced by the Kruskal-Wallis Test results showing no statistically significant differences in scores between the length of service groups (H(4) = 5.28, p = .260). The acceptance of the null hypothesis indicates that teachers with varying years of experience engage similarly in implementing the program. This finding suggests that factors such as professional development, instructional resources, and collaborative practices may be equally accessible to teachers regardless of their tenure, highlighting a consistent commitment to the program's objectives across all levels of experience.

The present study's findings align with Louie et al. (2022), which reported no significant differences in program implementation based on professional or demographic characteristics. The Kruskal-Wallis Test results indicate that length of service does not significantly influence teachers' implementation of the NMP, underscoring consistency in teaching practices across experience levels. This suggests that factors such as professional development and access to resources contribute to a standardized approach to implementing the program, fostering a shared commitment to its goals among teachers regardless of their tenure.

Highest Educational Attainment

Table 17

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| Difference Between the Highest Educational Attainment Groups of the Teachers | | | | | | |
|--|------|----|------|------------------------|---|--|
| Groups | Н | df | p | Decision | | |
| EdD/PhD Graduate | 1.74 | 4 | .783 | Accept H ₀₁ | _ | |
| with EdD/PhD units | | | | (Not Significant) | | |
| MA Graduate | | | | | | |
| with MA units | | | | | | |
| Education Graduate | | | | | | |

As shown in Table 17, a Kruskal-Wallis Test was conducted to assess the difference between highest educational attainment groups of the teachers. The Kruskal-Wallis Test results revealed no statistically significant difference in scores between the highest educational attainment groups (H(4) = 1.74 p = .783) at the 5% level; thus, the null hypothesis was accepted. In conclusion, these findings suggest that highest educational attainment may have no effect on teachers' implementation of the NMP.

This implies that the highest educational attainment of the teachers does not significantly influence the implementation of the NMP, as indicated by the Kruskal-Wallis Test results showing no statistically significant differences in scores between the groups based on their highest educational qualifications (H(4) = 1.74, p = .783). The acceptance of the null hypothesis suggests that teachers, regardless of their educational background, are similarly engaged in implementing the program. This finding highlights the possibility that the effectiveness of the program's implementation is determined more by factors such as practical teaching experience, access to resources, and professional development opportunities rather than solely by formal educational credentials.

The present study's findings are consistent with De La Rie et al. (2021), which similarly observed no significant differences in program implementation based on educational qualifications. The Kruskal-Wallis Test results indicate that the highest educational attainment does not significantly affect teachers' implementation of the NMP, supporting the idea that engagement in the program is not determined solely by academic credentials. This suggests that practical experience, professional development, and access to teaching resources may play a more significant role in ensuring the effective implementation of the program, regardless of educational background.

Statement of the Problem No. 5: *Is there a significant correlation between perceived implementation of the NMP of teachers and their primary learners' numeracy skill levels?*

Table 18

Correlation between the Perceived Implementation of the NMP of Teachers and Their Primary Learners' Numeracy Skill Levels

| Dependent Variables | r | р | Interpretation | | Decision |
|------------------------|-----|------|---------------------------|------|---|
| Addition of Numbers | .10 | .293 | Positive Weak | | Accept H ₀₂ |
| | | | Correlation | | (Not Significant) |
| Subtraction of Numbers | .08 | .419 | Positively Correlation | Weak | Accept H ₀₂ (Not Significant) |

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| Multiplication of Numbers | .00 | .970 | Positive | Weak | Accept H ₀₂ |
|---------------------------|-----|------|-------------|------|------------------------|
| | | | Correlation | | (Not Significant) |
| Division of Numbers | 01 | .932 | Negative | Weak | Accept H ₀₂ |
| | | | Correlation | | (Not Significant) |
| Overall | .06 | .554 | Positive | Weak | Accept H ₀₂ |
| | | | Correlation | | (Not Significant) |

As shown in Table 18, the correlation between the perceived implementation of the NMP of teachers and their primary learners' numeracy skill levels by using the Spearman's Rho Correlation.

It shows that the perceived implementation of the NMP of teachers had a *positively weak non-significant correlation* with the learners' numeracy skill levels in terms of addition of numbers (r = .10, p = .293), a *positively weak non-significant correlation* in terms of subtraction of numbers (r = .08, p = .419), a *positively weak non-significant correlation* in terms of multiplication of numbers (r = .00, p = .970), a *negatively weak non-significant correlation* in terms of division of numbers (r = .01, p = .932), and a *positively weak non-significant correlation* with the overall learner's numeracy skill levels (r = .06, p = .554), at 5% significance level; thus, the null hypothesis was *accepted*.

The positive correlation implies that as the value of independent variables (teachers' implementation of the NMP) increased, the value of the dependent variables (learners' numeracy skill levels) tended to increase. Therefore, the results suggest that greater implementation of the NMP by teachers is associated with higher numeracy skill levels among their learners.

This implies that while there is a positive correlation between the perceived implementation of the NMP by teachers and the learners' numeracy skill levels, this relationship is weak and not statistically significant. The correlation coefficients for various numeracy skills, including addition, subtraction, multiplication, and overall numeracy skills, indicate that increases in teachers' implementation do not reliably lead to improvements in learners' numeracy skills. The acceptance of the null hypothesis suggests that other factors may be influencing learners' numeracy abilities, indicating that merely enhancing program implementation may not be sufficient to elevate learner performance. Thus, it highlights the need for further investigation into additional variables that could contribute to effective numeracy skill development in primary learners.

The present study's findings are in line with Bremner et al. (2022), which also found weak and non-significant correlations between program implementation and learner outcomes. The results indicate that the perceived implementation of the NMP by teachers has weak, nonsignificant correlations with learners' numeracy skill levels across various mathematical operations (e.g., addition, subtraction, multiplication, division). This suggests that while a positive relationship exists between the program's implementation and learners' numeracy skills, other influencing factors beyond program implementation might be contributing to the learners' performance, warranting further exploration into these variables.

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Statement of the Problem No. 6: *What enhancement program can be proposed for mathematics instruction to improve the implementation of the NMP and primary learners' numeracy skill levels?*

An Enhanced Mathematics Instructional Program to Improve the Implementation of the NMP and Primary Learners' Numeracy Skill Levels

The implementation of the NMP is vital in developing elementary learners' numeracy skills, yet it faces challenges such as limited age and gender diversity among teachers, insufficient instructional material usage, and ineffective teaching strategies. These issues, along with gaps in learners' basic math skills, hinder the program's effectiveness. To address them, the program promotes inclusive teacher recruitment, mentorship for novice teachers, training on instructional material use, and the adoption of diverse teaching strategies. It also includes targeted interventions to improve learners' proficiency in core mathematical operations like addition, subtraction, multiplication, and division. Through these efforts, the NMP aims to enhance both teacher performance and learner outcomes in mathematics.

5. DISCUSSIONS

Statement of the Problem No. 1: *How may the profile of the teachers be described in terms of age, sex, grade assignment, teaching position, length of service, and highest educational attainment?*

The age distribution of teachers skews toward mid-career professionals, with the largest group (35.19%) falling in the 30-39 year range, followed by those aged 40-49 (26.85%), creating a workforce predominantly composed of experienced educators. The smaller percentages of both young teachers (15.74% aged 20-29) and senior educators (5.56% aged 60+) suggest limited generational diversity while maintaining a core of seasoned professionals. This experience-heavy composition aligns with Monteiro and Forlin's (2021) findings that experienced teaching workforces contribute to effective educational practices and knowledge transfer.

The significant gender imbalance in the teaching workforce, with 88.89% female and only 11.11% male teachers, reflects a female-dominated profession that aligns with broader educational trends identified by Kundu (2022). This substantial disparity may influence teaching approaches, classroom dynamics, and mentoring styles available to learners across educational settings. The predominance of female teachers potentially shapes the educational environment in ways that might differ from more gender-balanced teaching staffs, possibly affecting student experiences and educational outcomes.

The distribution of teachers across grade levels shows a clear concentration in higher primary grades, with 36.11% teaching Grade 3 and 26.85% teaching Grade 2, suggesting a strategic emphasis on later stages of early primary education. This pattern aligns with Nash et al.'s (2021) findings that teachers in primary education are more frequently assigned to middle grades where foundational academic skills are reinforced. The relatively smaller percentages of teachers handling Grade 1 (20.37%) and Kindergarten (16.67%) may indicate a resource allocation strategy that prioritizes grades where literacy and numeracy development become increasingly critical.

The distribution of teaching positions shows a career progression pattern with most educators holding mid-level positions (Teacher III at 32.41% and Teacher II at 19.44%) while significantly fewer occupy senior master teacher roles (combined 13.89%). This hierarchy mirrors

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findings from Sibanda and Amin (2021) that identified similar patterns of limited advanced positions across teaching institutions. The presence of contractual teachers (15.74%) alongside the predominance of regular teaching positions suggests potential constraints in professional advancement opportunities and available mentorship for newer educators.

The teacher experience distribution shows a predominantly early to mid-career workforce with 36.11% having less than 9 years of service and 32.41% having 10-19 years, while only 2.78% have served 40+ years. This pattern aligns with Williams III's (2022) observations of workforce renewal in educational institutions, suggesting an influx of potentially innovative practices alongside reduced institutional memory. The predominance of newer teachers may promote adaptability while potentially limiting access to deeply seasoned pedagogical expertise within the teaching community.

The educational qualifications of teachers show moderate advancement, with a third (33.33%) holding Master's degrees and another 29.63% pursuing MA units, while doctoral-level achievement remains limited (2.78% completed, 7.41% in progress). This distribution aligns with Iqbal and Ali's (2024) findings that teachers actively pursue advanced degrees despite relatively few reaching the highest academic qualifications. The diverse educational backgrounds across the teaching workforce highlight the ongoing need for robust professional development opportunities to enhance pedagogical expertise and instructional innovation.

Statement of the Problem No. 2: *How may the teachers describe the implementation of the NMP in terms of utilization of instructional materials, teaching strategies and methods, learners' engagement and participation, and professional development and training?*

The implementation of the National Mathematics Program regarding instructional materials shows consistent moderate implementation across all indicators (general mean 3.18), with technology integration scoring highest (3.22) despite remaining at only a moderate level. This pattern aligns with Mendiola and Estonanto's (2022) findings that also identified moderate implementation of instructional materials in mathematics education, suggesting common challenges across educational settings. Both studies highlight the need for increased resource access, enhanced teacher technological proficiency, and targeted professional development to improve instructional material utilization in mathematics education.

The implementation of the National Mathematics Program regarding teaching strategies shows consistent moderate implementation across all indicators (general mean 3.20), with formative assessment practices scoring slightly higher (3.24) than other strategies. This finding parallels Moh'd et al.'s (2021) study which similarly identified moderate implementation levels and emphasized formative assessment as a relatively stronger practice among mathematics teachers. Both studies suggest that while teachers recognize the value of responsive teaching practices, additional professional development and instructional support would help optimize these teaching methods to enhance student outcomes in mathematics education.

The implementation of learner engagement strategies in the National Mathematics Program shows consistent moderate implementation across all indicators (general mean 3.20), with discovery-based activities scoring highest (3.24) despite remaining at a moderate level. This pattern aligns with Sabado and Lastrella's (2024) findings which similarly reported moderate implementation of student engagement practices in mathematics instruction. Both studies suggest that while teachers recognize the value of active learning approaches, additional professional

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development and resources are needed to fully integrate these strategies and maximize student participation in mathematics education.

The implementation of the NMP in terms of professional development and training was "Moderately Implemented," with a general mean rating of 3.20. The highest-rated indicator was the integration of updated assessment techniques (mean of 3.24), suggesting teachers are applying skills gained from training to evaluate learners' mathematical understanding. These results, consistent with Roesken-Winter et al. (2021), imply a need for more comprehensive and targeted professional development to further strengthen instructional practices.

Statement of the Problem No. 3: *How may the primary learners' numeracy skill levels be described in terms of addition of numbers, subtraction of numbers, multiplication of numbers, and division of numbers?*

The primary learners' numeracy skill levels were generally "Slightly Skilled," with a general mean rating of 2.88. Among the skills, "Addition of Numbers" was the highest, rated as "Moderately Skilled" with a mean of 3.16. This finding, consistent with O'Meara et al. (2024), highlights the need for targeted support to strengthen learners' skills beyond basic addition.

Statement of the Problem No. 4: *Is there a significant difference between the perceived implementation of the NMP and respondents' profile when grouped accordingly?*

The Kruskal-Wallis Test revealed no significant difference in the implementation of the NMP among teachers of different age groups (H(4) = 7.32, p = .120), leading to the acceptance of the null hypothesis. This suggests that teachers, regardless of age, demonstrate similar levels of program implementation. The finding supports Feng et al. (2023), who also found minimal impact of demographic factors on teaching practices.

The Kruskal-Wallis Test found no significant difference between male and female teachers in implementing the NMP (H(1) = .37, p = .541), leading to the acceptance of the null hypothesis. This suggests that both male and female teachers demonstrate similar levels of program implementation. The finding supports Fatima et al. (2021), who also reported no significant impact of sex on teaching practices.

The Kruskal-Wallis Test revealed no significant difference in the implementation of the NMP across different grade assignments (H(3) = 1.18, p = .757), leading to the acceptance of the null hypothesis. This indicates that teachers, whether assigned to Kindergarten, Grade 1, Grade 2, or Grade 3, implement the program similarly. The result supports Hunter et al. (2022), highlighting a consistent approach to teaching mathematics across grade levels.

The Kruskal-Wallis Test revealed no significant difference in the implementation of the NMP across teaching position groups (H(4) = 3.70, p = .448), leading to the acceptance of the null hypothesis. This suggests that teachers, whether holding higher or lower ranks, implement the program similarly. The finding supports Overwijk et al. (2022), highlighting consistent teaching practices regardless of professional status.

The Kruskal-Wallis Test found no significant difference in NMP implementation across teachers' length of service groups (H(4) = 5.28, p = .260), leading to the acceptance of the null hypothesis. This indicates that teachers, regardless of their years of service, implement the program

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similarly. The result supports Louie et al. (2022), emphasizing consistent teaching practices across different levels of experience.

The Kruskal-Wallis Test found no significant difference in NMP implementation across teachers' highest educational attainment groups (H(4) = 1.74, p = .783), leading to the acceptance of the null hypothesis. This suggests that teachers, whether education graduates or doctorate holders, implement the program similarly. The result aligns with De La Rie et al. (2021), emphasizing that practical experience and professional development, rather than academic degrees, may drive program implementation.

Statement of the Problem No. 5: *Is there a significant correlation between perceived implementation of the NMP of teachers and their primary learners' numeracy skill levels?*

The perceived implementation of the NMP by teachers had a weak, non-significant correlation with learners' numeracy skill levels in addition (r = .10, p = .293), subtraction (r = .08, p = .419), multiplication (r = .00, p = .970), division (r = -.01, p = .932), and overall skills (r = .06, p = .554). The acceptance of the null hypothesis suggests that while a positive relationship exists, it is weak and not statistically meaningful. This finding aligns with Bremner et al. (2022), indicating that other factors beyond NMP implementation may influence learners' numeracy performance.

Statement of the Problem No. 6: *What enhancement program can be proposed for mathematics instruction to improve the implementation of the NMP and primary learners' numeracy skill levels?*

The implementation of the NMP is crucial for developing elementary learners' numeracy skills but is challenged by limited teacher diversity, insufficient instructional material use, and ineffective strategies. To address these issues, the enhanced program promotes inclusive teacher recruitment, mentorship, training on materials, and diverse teaching methods, along with targeted interventions to strengthen learners' basic math skills. Through these initiatives, the NMP seeks to improve both teacher performance and learners' proficiency in core mathematical operations.

6. CONCLUSIONS

1. The teacher profile indicated a predominance of 30-39 years old, female teachers, Teacher III, with 9 years and below experience, and master's degree holder suggesting a committed teaching workforce in Grade 3 classrooms.

2. The teachers exhibited moderate implementation of the NMP, reflecting a need for enhanced strategies and materials to improve overall engagement and effectiveness.

3. The learners demonstrated moderately skilled numeracy levels, particularly in addition and subtraction, indicating areas for targeted intervention and support to boost their overall mathematical competencies.

4. The teachers' implementation of the NMP was not significantly influenced by demographic factors such as age, sex, grade assignment, teaching position, length of service, or educational attainment, highlighting a uniformity in program execution regardless of these variables.

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5. The learners' numeracy skill levels showed weak, positive, and non-significant correlations with the perceived implementation of the NMP, indicating that improvements in program execution may not directly translate to enhanced learner outcomes in mathematics.

6. An enhanced mathematics instructional program has been developed to improve the implementation of the NMP and primary learners' numeracy skill levels.

7. RECOMMENDATIONS

1. Teachers should continue leveraging their advanced qualifications and commitment to further enrich Grade 3 mathematics instruction, setting a strong foundation for learner learning.

2. Teachers and school heads should collaborate to incorporate innovative strategies and diverse materials to enhance engagement and effectiveness in implementing the NMP.

3. Parents and teachers should provide targeted support in addition and subtraction to strengthen learners' foundational numeracy skills.

4. School heads should ensure that standardized implementation guidelines for the NMP are consistently applied across teaching demographics to maintain uniformity.

5. Teachers should focus on learner-centered approaches and formative assessments to address numeracy skill gaps, recognizing that program implementation alone may not yield direct improvements.

6. School heads and teachers should adopt and integrate the enhanced mathematics instructional program to elevate the implementation of the NMP and support learners' numeracy development.

7. Further studies on the relationship between the implementation of the NMP and learners' numeracy outcomes are recommended to identify specific factors that may drive significant improvements in mathematical proficiency.

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