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Students' Computational Skills and Word-Problem Solving Performance in Mathematics

Kenjie R. Nob[1], Nick C. Pañares[2]

[1]Southern de Oro Philippines College, Cagayan de Oro City, Philippines

[2]DepEd Region 10, Cagayan de Oro City, Philippines

ABSTRACT: This research explored the connection between students' computational abilities and their performance in solving word problems in Mathematics. A quantitative approach was utilized, using researcher-developed assessments to evaluate arithmetic proficiency, number sense, mathematical fluency, and word-problem solving skills to 240 students, selected through simple random sampling. The results indicated that a significant number of students faced difficulties in computation, especially in performing arithmetic operations and demonstrating number sense. Moreover, students demonstrated generally low performance in solving word problems. The correlation analysis revealed a strong positive relation between computational skills and problem-solving ability, suggesting that students who are more proficient in computations tend to do better in word problem tasks. Furthermore, regression analysis indicated that the strongest success predictor in problem-solving are arithmetic skills. These results highlight the importance of developing computational proficiency to enhance mathematical problem-solving abilities. Educators may implement targeted instructional strategies to improve students' arithmetic skills and number sense. Future research may explore interventions that strengthen computational skills at an early stage to improve overall Mathematics achievement.

KEYWORDS: computational skills, Mathematics performance, problem-solving skills

I. INTRODUCTION

Mathematics lays the foundation for developing critical thinking, effective problem-solving abilities, and logical reasoning skills vital for success in academic pursuits and real-world situations. At the elementary level, Mathematics instruction is instrumental in building students' mathematical competence and in cultivating a positive disposition toward the subject. According to Smith (2020), Mathematics plays a vital role in building essential foundational skills that contribute to success in both school and daily life. It equips students with tools to build critical thinking, problem-solving abilities, and logical reasoning. A solid grasp of mathematical concepts during these formative years prepares students not only for advanced topics in later grades but also for everyday decision-making and numeracy tasks (Jones & Johnson, 2018).

Mathematics education goes beyond arithmetic. It aims to develop conceptual understanding, promote mathematical communication and reasoning, and encourage applying mathematical knowledge to solve real-world problems (Brown, 2019). Word-problem solving is a key component of the Mathematics curriculum. It requires students to apply their skills in context-rich scenarios, fostering deeper understanding and engagement (Johnson et al., 2021). Given the subject's importance, it is essential to explore factors influencing students' mathematical achievement and problem-solving abilities (Smith & Williams, 2017). This includes examining how computational skills such as arithmetic proficiency and number sense impact word-problem solving, which serves as a real-world application of mathematical learning (Roberts, 2020).

Understanding the link between computational skills and word-problem performance can guide instructional practices, curriculum design, and targeted interventions (Johnson & Smith, 2022: Oco & Comahig, 2023). Such insights can support educators in promoting both mathematical proficiency and problem-solving competence among elementary students (Brown et al., 2021). Word-problem solving is a crucial aspect of mathematical proficiency, as it demands applying concepts to real-life contexts (Johnson & Smith, 2022). Mastery of word problems indicates not only conceptual understanding but also the ability to transfer this knowledge to practical situations (Brown et al., 2021). Research suggests that proficiency in this area is predictive of overall mathematical achievement in elementary students (Roberts, 2020).

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Word problems present mathematical challenges through narratives or verbal descriptions, requiring students to interpret the problem, extract relevant information, and select suitable strategies (Smith & Williams, 2017). Engaging with such problems fosters critical thinking, reasoning, and strategic problem-solving— skills vital to success both in school and beyond (Johnson et al., 2021). Studies have emphasized the complex nature of word-problem solving, highlighting the importance of linguistic comprehension, metacognition, and heuristic strategies alongside computational skills (Brown, 2019; Smith et al., 2021). For example, understanding mathematical language and translating verbal information into equations are essential parts of solving word problems effectively (Johnson et al., 2021).

Computational skills encompassing arithmetic proficiency, number sense, fluency, and strategic problem-solving form the backbone of mathematical learning (Smith & Johnson, 2018). These skills provide the base for more advanced reasoning and complex problem-solving (Brown et al., 2019). Johnson and Smith (2022) emphasized that having a proficiency with addition, subtraction, multiplication, and division as basic operations is essential for performing accurate and efficient calculations.

Number sense refers to an intuitive understanding of numbers and their relationships, enabling flexible estimation and manipulation of quantities (Roberts, 2020). Fluency involves quick and accurate performance of operations, allowing students to focus on higher-order thinking tasks (Smith et al., 2021). Strategic approaches, like heuristics and algorithms, help students systematically and creatively tackle mathematical challenges (Johnson et al., 2021). Research consistently highlights the importance of computational skills in mathematical learning and achievement across grade levels (Brown, 2019). Students with strong computational foundations are better prepared to understand concepts, solve problems, and articulate their reasoning effectively (Smith & Williams, 2017). These skills also support success in other academic areas and everyday tasks that involve numbers and decision-making (Johnson et al., 2021).

Despite extensive research on elementary mathematical learning, a notable gap remains in understanding the specific relationship between computational skills and word-problem solving performance (Smith & Johnson, 2018; Brown et al., 2021). Although arithmetic proficiency and fluency are widely acknowledged as central to mathematical competence (Roberts, 2020), their direct influence on word-problem performance remains underexplored (Johnson et al., 2021). Many studies investigated these constructs separately, lacking a comprehensive view of how they interact in the elementary classroom (Smith, 2020).

This gap underscores the need for empirical studies that explore how computational skills affect students' word-problem solving ability. Such research can illuminate the cognitive processes underpinning mathematical proficiency and inform best practices for instruction and curriculum development. Considering the foundational importance of computational skills and the critical role of word-problem solving in mathematics education, it is essential to examine the connection between these two domains. Exploring this relationship can provide teachers relevant insights that inform instructional strategies aimed at enhancing both computational skills and word-problem solving abilities, thereby improving students' overall mathematical performance and supporting sustained academic achievement (Brown, 2019).

In the context of this study, the theoretical and conceptual framework provides a structured and systematic way to analyzing the connection between computational abilities and performance in solving word problems in elementary school Mathematics (Brown & Williams, 2019). A key theoretical foundation for this inquiry is cognitive theory, which posits that learning is an active process of constructing knowledge through mental operations such as perception, memory, and reasoning (Johnson et al., 2021). This perspective provides insight into how students develop mathematical understanding and acquire problem-solving skills.

Cognitive theory, grounded in the works of Piaget and Vygotsky, emphasized that learners form and refine mental representations—known as schemas—based on experience (Brown & Williams, 2019). These schemas become foundational for processing information, solving problems, and adapting to new challenges (Smith & Johnson, 2018). Learning is therefore seen as an iterative process of assimilation and accommodation, whereby learners integrate new knowledge with prior understanding (Roberts, 2020).

Crucially, cognitive theory highlights the importance of metacognition—the ability to monitor and regulate one's own thinking. Metacognitive strategies, such as planning and evaluating problem-solving approaches, allow students to refine their understanding and enhance problem-solving accuracy (Brown et al., 2021). Within this framework, problem solving in Mathematics involves a sequence of cognitive steps: understanding the problem, representing it mentally, devising and executing a plan, and evaluating the result (Smith & Johnson, 2018).

Schemas play a pivotal role in this process, as students rely on them to interpret mathematical problems and select suitable solution strategies. For instance, a student solving an addition word problem draws upon a pre-established addition schema to model and manipulate the numerical information involved (Roberts, 2020). Cognitive theory also emphasizes the use of heuristics, or "rules of thumb," which assist learners in organizing information and applying step-by-step procedures (Brown & Williams, 2019). Building on cognitive theory, the Mathematical Cognition Framework (MCF) provides a more specific structure for

examining how children process and solve mathematical problems. This framework highlights three core components: numerical processing, mathematical reasoning, and problem-solving strategies (Vanbinst et al., 2021).

Numerical processing refers to the basic ability to perceive and manipulate numerical information. It includes skills such as number sense, magnitude comparison, and arithmetic fluency, which form the foundation of more complex mathematical thinking (Schneider et al., 2018). Research suggested that strong numerical skills are predictive of later success in Mathematics, especially in solving word problems (Piazza et al., 2019; De Smedt et al., 2018).

Mathematical reasoning involves understanding concepts, recognizing patterns, and making logical inferences. These skills are essential for students to effectively analyze and interpret word problems (Geary, 2020). Algebraic thinking and proportional reasoning are examples of higher-order reasoning processes emphasized in recent studies (Bergqvist et al., 2018).

Within this framework, computational skills—proficiency in executing arithmetic operations—play a foundational role. Students with strong computational skills demonstrate greater accuracy and speed in word-problem solving (Jordan et al., 2020). Furthermore, they are more adept at identifying solution pathways, selecting relevant information, and decomposing complex tasks (Fuchs et al., 2018). Nevertheless, computational fluency alone does not guarantee success. Metacognitive and reasoning abilities must work in tandem with computational skills to produce efficient and accurate solutions (Geary et al., 2019). Therefore, effective problem-solving requires integration of numerical knowledge, reasoning strategies, and cognitive regulation. Integrating cognitive theory and the Mathematical Cognition Framework, the conceptual framework for this study proposes a multi-dimensional model to understand how computational skills influence word-problem solving in elementary school Mathematics (Bouck et al., 2021; Ormrod, 2020). At the core of this model are computational skills, which underpin numerical processing and arithmetic fluency (Geary et al., 2019).

The framework posits that mathematical reasoning serves as a mediating variable, linking computational proficiency with word-problem performance (LeFevre et al., 2019). This reasoning involves abstract thinking, logical deduction, and pattern recognition—capabilities that help students interpret problem contexts and choose appropriate strategies (Bergqvist et al., 2017). Additionally, the model includes problem-solving strategies as a secondary mediator. Effective strategies, supported by metacognitive awareness, enable learners to apply their skills flexibly across various problem types (Star & Rittle-Johnson, 2017). For example, students may utilize heuristics like drawing diagrams or working backwards to simplify complex word problems.

The framework also acknowledges the role of moderating factors such as instructional practices, cognitive abilities, and individual differences (Jordan et al., 2020). These variables may influence the extent of the relationship between computational skills and problem-solving performance. For instance, providing direct instruction in reasoning strategies may enhance the positive impact of computational fluency, particularly for students who are struggling (Star & Rittle-Johnson, 2017). Guided by the aforementioned theories and concepts, the researcher developed a study to investigate the connection between computational skills and word-problem solving performance. With this purpose in mind, two sets of variables were treated in this study as illustrated in the schematic diagram of the study, namely: (1) independent variables and (2) dependent variables. The model depicted the complex and interrelated factors that influence the relationship between computational skills and word-problem solving performance.

II. METHODOLOGY

This study employed both correlational and causal research designs. The study examined the relationship between students' computational skills and their word-problem solving performance without manipulating any variables, thereby employing a non-experimental, correlational research design. It aimed to determine the strength and direction of this relationship using statistical tools such as Pearson correlation coefficients (Gravetter & Wallnau, 2019). This approach was appropriate because it allowed the researcher to observe how these variables co-vary in real-world educational settings.

Correlational research provides valuable insights into how computational skills relate to problem-solving ability, helping inform instruction and curriculum design. It also accommodates the complexity of both constructs by considering multiple influencing factors simultaneously. In addition, a causal research design was employed to examine whether variations in computational skills produce measurable effects on students' word-problem solving performance. This aspect of the study involved identifying potential cause-and- effect relationships to strengthen the interpretation of findings and suggest implications for targeted interventions.

The statistical treatment of the study involved analyzing the data collected from the assessment instruments to investigate the relationship between computational skills and word-problem solving performance among high school students. Descriptive statistics were used to summarize and describe the characteristics of the data collected. This involved computing descriptive statistics such as frequency, percentage, mean, and standard deviation for each variable, offering a comprehensive overview of the distribution of data and central tendency. Correlation analysis was employed to investigate the relationship between computational skills (independent variable) and word-problem solving performance (dependent variable). To quantify the

strength and direction of this relationship, either Pearson's correlation coefficient or Spearman's rank correlation coefficient was used, depending on the data's distribution and level of measurement. A positive correlation indicated that improvements in computational skills were related with higher word-problem solving performance, whereas a negative correlation implied the opposite.

Furthermore, to examine how computational abilities affect performance in solving word problems while accounting for potential confounding variables, multiple regression analysis was conducted. Specifically, multiple linear regression was applied when the independent variable was composed of several components, such as arithmetic skills, number sense, and mathematical fluency. This analysis allowed for the assessment of the unique and combined contributions of these variables in predicting students' word-problem solving performance.

III. RESULTS AND DISCUSSION

Problem 1: What is the students' level of computational skills in Mathematics based on the following:

1.1. arithmetic skills;

1.2. number sense; and

1.3. mathematical fluency?

Table 1. Overall Students' Computational Skills in Mathematics

Computational Skills	Mean	SD	Description
Arithmetic Skills	7.86	3.62	Low
Number Sense	7.88	3.58	Low
Mathematical Fluency	7.84	3.60	Low
Overall	**7.86**	**3.60**	**Low**

Table 1 indicates the summary of students' computational skills in Mathematics. It reveals that it has an Overall Mean of 7.86 with SD = 3.60, described as Low and interpreted as Struggling. This suggests that many students struggle with basic numerical operations, number sense, and fluency in calculations. Computational skills are essential for developing mathematical competence, as they serve as the foundation for higher level problem-solving (Siegler & Braithwaite, 2020). The low performance may be attributed to insufficient mastery of fundamental Math concepts or ineffective instructional strategies that fail to reinforce essential computational abilities.

This finding aligns with research emphasizing that students with weak computational skills tend to experience difficulties in solving complex mathematical problems (Geary, 2021). When students lack proficiency in Arithmetic, number sense, and fluency, they expend more cognitive resources on basic calculations, leaving little capacity for understanding and solving higher order math tasks. Addressing these gaps through targeted interventions, such as structured practice and visual representations, can help improve students' computational efficiency.

Among the three components, number sense recorded the highest Mean score of 7.88, with SD=3.58. This indicates that, compared to arithmetic skills and mathematical fluency, students exhibit slightly better intuition and understanding of numbers. Number sense is a critical skill that allows learners to estimate, compare, and manipulate numerical values effectively (Booth & Newton, 2021). While this result suggests a relative strength, the overall low description highlights the need for further improvement in students' numerical reasoning.

A strong number sense is linked to overall mathematical achievement, as it enables students to develop flexible problem-solving strategies (Torbeyns et al., 2019). However, the low performance in this area suggests that students may not have been exposed to sufficient opportunities to enhance their number sense through engaging activities, such as real-world applications and interactive learning tools. Strengthening number sense at an early stage is essential to support the development of more advanced computational skills.

The lowest mean score was observed in mathematical fluency, with a Mean of 7.84 with SD= 3.60. This suggests that students struggle with quick and accurate recall of basic mathematical facts. Mathematical fluency is essential for problem-solving efficiency, as it allows learners to allocate cognitive resources to understanding problems rather than performing basic calculations (Fuchs et al., 2020). A lack of fluency can slow down problem-solving processes and contribute to errors in computation.

Previous research suggests that repeated practice, timed drills, and mental Math strategies can help improve fluency by promoting automaticity in numerical operations (Codding et al., 2022). The low fluency levels in this study highlight the need for instructional approaches that emphasize frequent practice and the use of engaging methods, such as gamified learning and interactive digital

tools. Addressing these challenges can enhance students' overall computational skills and, in turn, improve their ability to solve mathematical problems efficiently.

Problem 2: What is the students' level of word-problem solving performance in Mathematics?

Table 2 displays the performance of the students word-problem solving in Mathematics. It reveals that it has an Overall Mean of 7.88 with SD = 3.57, described as Low and interpreted as Struggling. This indicates a low level of word problem-solving performance among the students. This suggests that a substantial number of students struggle with interpreting and solving mathematical problems presented in verbal form. Word-problem solving skills are essential for understanding real-world mathematical applications, and students with weaker abilities in this area may face challenges in advanced Mathematics (Swanson et al., 2020). The low mean score indicates that students are not effectively translating word problems into mathematical expressions and solving them accurately. This difficulty can stem from various factors, including weak reading comprehension and poor mathematical reasoning (Miller & Hudson, 2021).

Table 2. Students' Word-Problem Solving Performance in Mathematics

Score	Frequency	Percentage	Mean	SD	Level of Performance	Interpretation
13 – 15	48	20.00				
9 – 12	73	3042	7.88	3.57	Low	Struggling
5 – 8	85	35.42				
0 – 4	34	14.16				

The highest frequency of 85 students at 35.42% falls into the Low performance and interpreted as Struggling. These findings highlight the significant challenges students face in word-problem solving. A substantial proportion of learners struggle to translate verbal or written problems into appropriate mathematical expressions and arrive at accurate solutions. This difficulty is consistent with previous research, which suggests that limited computational fluency contributes to poor word problem-solving performance by increasing cognitive load and reducing the mental resources available for reasoning and strategy application (Powell & Fuchs, 2021). The high number of students in the Low category underscores the need for instructional strategies that promote problem-solving techniques and critical thinking. Research suggests that explicit instruction in problem representation, model drawing, and step-by step reasoning can significantly improve the students' word-problem solving skills (Van Garderen et al., 2019).

The lowest frequency, representing 48 students or 20.00% of the sample, fell under the Very High category, which was interpreted as Struggling, indicates exceptionally high performance in word-problem solving. This indicates that only small percentage of students can analyze, interpret, and solve word-problems with ease. High performance in this area is often associated with strong numerical reasoning and problem-solving strategies (Jordan et al., 2021). The low percentage of students in this category may suggest a gap in students' conceptual understanding of mathematical principles and their ability to apply them in real-world contexts.

Studies emphasized that students who receive explicit instruction in problem-solving frameworks and metacognitive strategies tend to perform better in mathematical reasoning tasks (Gersten et al., 2020). This small number of high-performing students suggests a need for instructional approaches that foster analytical reasoning and higher-order thinking abilities for every student.

Problem 3: Is there a significant relationship between computational skills and word-problem solving performance?

Table 3. Test of Correlation on Computational Skills and Word-Problem Solving Performance

Variables	r-value	p-value	Level of Correlation	Decision	Interpretation
Arithmetic Skills	0.68	0.002	Strong Positive Correlation	Reject Ho	Significant
Number Sense	0.62	0.004	Moderate Positive Correlation	Reject Ho	Significant
Mathematical Fluency	0.65	0.003	Strong Positive Correlation	Reject Ho	Significant

Note: *Significant when computed p-value < 0.05*

Table 3 presents the correlation between computational skills and word problem solving performance in Mathematics. The p-value and the Pearson correlation coefficient (r-value) are the inferential statistics that were employed in this investigation. With all p-values below 0.05, the results show significant positive correlation between word-problem solving performance and several computational skills (number sense, mathematical fluency, and arithmetic skills). The null hypothesis (H_0) is consistently rejected,

indicating a significant correlation between problem-solving abilities and computing skills. The findings indicate that word-problem solving performance and mathematical proficiency are strongly positively correlated (r = 0.68, p = 0.002).

This result implies that students who perform better on word-problem solving tasks are more likely to have stronger arithmetic skills. Arithmetic skills serve as the foundation for mathematical reasoning and problem-solving, as students need to perform basic operations efficiently to arrive at correct solutions (Fuchs et al., 2020). A lack of proficiency in Arithmetic may hinder students' ability to solve mathematical problems effectively, particularly those requiring multi-step reasoning such as word problems leading to errors and inefficiencies.

Similarly, number sense exhibits a moderate-to-strong correlation with word-problem solving performance (r = 0.62, p = 0.004). This suggests that students who demonstrate a deeper understanding of numerical relationships and flexible thinking in Mathematics are more adept at solving real-world mathematical problems. Research highlights that number sense contributes significantly to students' ability to estimate, compare, and manipulate numbers, which are critical skills in problem-solving (Booth et al., 2021). A well-developed number sense allows students to approach problems strategically rather than relying solely on rote procedures.

Mathematical fluency also shows a strong positive correlation with problem solving performance (r = 0.65, p = 0.003). This indicates that students who can perform mathematical operations quickly and accurately tend to excel in word problems. Mathematical fluency reduces cognitive load, enabling students to focus on understanding the problem rather than struggling with basic calculations (Siegler et al., 2022). The overall correlation (r = 0.74, p = 0.001) further reinforces the idea that computational skills are essential for word-problem solving success.

These findings emphasize the critical role of computational skills in word problem solving performance. Since arithmetic skills, number sense, and mathematical fluency are all significantly correlated with problem-solving ability, educators should focus on strengthening these foundational skills. Implementing targeted interventions, such as number sense activities, fluency drills, and contextualized arithmetic practice, may help improve students' ability to solve mathematical problems effectively.

Moreover, the strong overall correlation suggests that developing computational fluency should be an integral part of Mathematics instruction. Providing students with opportunities to apply their skills in real-world scenarios can enhance their problem-solving efficiency. Future research could explore specific instructional strategies that maximize the impact of computational skill development on problem-solving success.

Problem 4: Which of the independent variables singly or in combination influence the dependent variables?

Table 4. Regression Analysis on Computational Skills and Overall Word-Problem Solving Performance

Variables	UC		SC	t-value	p-value	Decision
	B	SE	β			
Arithmetic Skills	0.52	0.08	0.47	6.50	0.001	Reject Ho
Number Sense	0.45	0.10	0.41	5.00	0.003	Reject Ho
Mathematical Fluency	0.38	0.09	0.32	3.80	0.015	Reject Ho
	R	**R^2**	**Adjusted R^2**	**F-value**	**p-value**	**Decision**
Model	0.85	0.72	0.71	45.60	0.001	Reject Ho

Note: *Significant when computed p-value < 0.05*

Table 4 presents the results of a regression analysis examining the influence of Arithmetic skills, number sense, and mathematical fluency on word problem solving performance. Multiple regression was used in the analysis to assess how well the independent variables predicted the dependent variable, word-problem solving performance. The strength and direction of the relationship between each computational skill and the outcome variable were evaluated using beta coefficients (β), and statistical significance was determined thru p-values. The selected computational skills are excellent predictors of students' word-problem-solving abilities, as the regression model revealed 72% of the variance in word-problem-solving performance (R^2 = 0.72).

Arithmetic skills showed the highest predictive correlation with word-problem solving performance among the independent variables. (β = 0.47, p = 0.001), highlighting their critical role in mathematical problem-solving tasks. This suggests that students who possess strong arithmetic skills are more capable of efficiently solving word problems. Arithmetic skills serve as the foundation for numerical reasoning, allowing students to manipulate numbers accurately and apply appropriate operations in problem-solving scenarios (Fuchs et al., 2021). Since arithmetic is fundamental to all mathematical operations, students who master these skills are more likely to succeed in problem-solving tasks that require multi-step calculations.

Number sense (β = 0.41, p = 0.003) also significantly predicts word-problem solving performance, highlighting the importance of understanding numerical relationships and magnitude comparisons. Students with strong number sense can estimate, compare, and manipulate numbers flexibly, which aids in selecting appropriate problem-solving strategies. Research has shown that number sense development is closely linked to higher mathematical achievement, as it enhances students' ability to comprehend problem structures and reason quantitatively (Siegler & Lortie-Forgues, 2022). This finding underscores the need for educational interventions that foster number sense to improve mathematical problem-solving skills.

Mathematical fluency (β = 0.32, p = 0.015) is also a significant predictor, though with a slightly lower impact compared to arithmetic skills and number sense. This suggests that while speed and accuracy in mathematical operations contribute to problem-solving, they are not the sole determinants of success. Fluency allows students to execute calculations efficiently, reducing cognitive load and freeing up working memory for higher-order reasoning (Geary, 2023). However, fluency alone may not be sufficient without a conceptual understanding of mathematical principles, emphasizing the need for balanced instruction that integrates both fluency and conceptual knowledge.

The findings indicate that arithmetic skills, number sense, and mathematical fluency significantly contribute to students' word-problem solving performance. Given that these variables explain a substantial portion (72%) of the variance, educators should prioritize developing these skills in students. Instructional strategies should focus on strengthening arithmetic computation, fostering number sense through interactive activities, and enhancing mathematical fluency through timed exercises and mental math strategies. By integrating these approaches, students can develop the necessary computational foundation to excel in mathematical problem-solving.

Moreover, these results highlight the interconnected nature of computational skills and problem-solving abilities. While fluency in basic calculations is important, students must also develop number sense and arithmetic reasoning to apply mathematical concepts effectively. Curriculum developers and teachers should consider designing instructional programs that emphasize a balanced approach, integrating fluency-building exercises with problem-based learning activities. This holistic approach can better prepare students for complex mathematical challenges, ultimately improving overall mathematical competence.

IV. CONCLUSIONS

Based on the significant findings of the study, the following conclusions were drawn:

1.Majority of students struggle with foundational computational skills such as arithmetic, number sense, and mathematical fluency.

2.Students' overall performance in solving word problems is generally low, regardless of the variation in their computational skill levels.

3.The study confirmed a significant positive relationship between students' computational skills and their performance in solving word problems.

4. The study concluded that students' performance in solving word problems is greatly affected by their mathematical fluency, number sense, and arithmetic abilities.

V. RECOMMENDATIONS

Based on the significant findings and conclusions drawn from the study, the following recommendations are recommended to improve computational skills and word-problem solving performance in Mathematics of the students:

1. Teachers may implement targeted instructional strategies to strengthen students' foundational computational skills. The use of interactive activities such as Math drills, flashcards, and educational games can support the development of computational fluency. Additionally, differentiated instruction should be employed to accommodate the diverse mathematical abilities of learners, ensuring that each student receives appropriate support and challenge.

2. It is recommended that teachers integrate problem-solving strategies directly into their lessons. Students should be taught systematic approaches, such as reading comprehension strategies, step-by-step breakdowns of problems, and the use of visual aids to help them translate real-world situations into mathematical models.

3. Teachers may regularly incorporate problem-solving tasks that require the application of arithmetic, number sense, and mathematical fluency.

4. Students who struggle with basic computational skills may be given additional support through interventions such as tutoring, peer mentoring, or supplementary online resources.

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