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Mathematics Competency Skills and Teachers' Instructional Support Among Grade 7 Students in the Schools Division of Batangas City

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Abstract

The study aimed to assess Mathematics Competency Skills and Teachers' Instructional Support among Grade 7 students in the Division of Batangas City. It focused on learners' skills in percentages, performing operations on numbers, converting units of measure, and interpreting statistical graphs, as perceived by teachers. It also examined the extent to which instructional support strategies, such as supplementary worksheets, tutorial sessions, and mathematics simulation software, were implemented. Furthermore, the study explored the relationship between learners' competency levels and the instructional support provided, as well as the challenges teachers encountered in delivering such support.

A descriptive research design was employed, using questionnaires as the primary data collection tool. The respondents were 103 public junior high school Mathematics teachers from different schools in the Division of Batangas City. The researcher secured approval from the Schools Division Superintendent and school principals before distributing questionnaire links to Junior High School mathematics coordinators in Batangas City. Informed consent was obtained to ensure voluntary participation and participants' understanding of the study, while confidentiality and protection of personal information were maintained through compliance with the Data Privacy Act. Data was analyzed using statistical tools, including percentage, ranking, weighted mean, and Pearson's r, to ensure accurate interpretation of the results.

Findings revealed that learners' Mathematics competency skills were generally slightly competent in percentages, performing operations on numbers, and converting units of measure, indicating emerging competence. In contrast, learners showed moderate competence in interpreting statistical graphs. The implementation of instructional support strategies was found to be moderate, suggesting that while teachers utilized these methods, they were not fully maximized in classroom instruction. The study also established a significant relationship between learners' competency skills and the extent of instructional support, emphasizing the importance of effective teaching strategies in improving student performance. However, teachers faced several challenges, including limited resources for innovative instruction, difficulty in sustaining learners' motivation, and time constraints in preparing instructional materials, which affected the delivery of support.

In response, the digital learning activity platform Numera was developed as a centralized Mathematics resource aligned with the MATATAG Curriculum, offering videos, modules, worksheets, PDFs, and simulations. It is recommended that teachers strengthen instructional strategies through digital integration while schools provide adequate resources, time, and professional development. Continuous assessment, collaboration, and further research are also encouraged to enhance learners' competency and expand digital initiatives like Numera.

Keywords: *Mathematics Competency Skills, Instructional Support, Digital Learning Activity*

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https://journals.aloysianpublications.com
Volume 2 Issue 7 (2026)

1. Introduction

Background and Rationale

Mathematics is widely recognized as an essential subject that develops critical thinking, problem-solving skills, and economic competitiveness in both global and national contexts. Despite educational reforms in the Philippines, such as the implementation of the K to 12 Program under RA 10533 and the pursuit of Sustainable Development Goal 4: Quality Education, Filipino learners continue to demonstrate low performance in Mathematics, particularly in international assessments like PISA 2022. Learners commonly encounter difficulties in conceptual understanding, problem-solving, and foundational skills, which are further intensified by mathematics anxiety and limited instructional support. In Batangas City, teachers also face challenges such as diverse learner abilities, insufficient resources, and limited time for remediation, emphasizing the need for effective instructional strategies and interventions.

Various studies emphasized that instructional support plays a vital role in improving learners' Mathematics achievement and competency. Panaligan (2025) revealed that Grade 7 Mathematics teachers in Batangas City were knowledgeable in modern assessment approaches such as the SOLO taxonomy. However, they still required continuous mentoring, manageable class sizes, and effective digital resources to successfully implement these practices in the classroom. Research also showed that teachers who actively monitor learners' progress and apply varied instructional approaches are more effective in addressing diverse learning needs and minimizing learning gaps. Moreover, adequate teacher support, mentoring, and instructional resources were identified as important factors in strengthening the quality of Mathematics instruction and promoting better learner outcomes.

This research aimed to determine the level of Mathematics competency skills among Grade 7 learners and assess the extent of instructional support provided by teachers in Batangas City. Specifically, it sought to identify learners' strengths and weaknesses in Mathematics competencies, evaluate the effectiveness of teachers' instructional practices, and determine areas where additional support and interventions are necessary. The findings served as basis for the development of a digital learning activity intended to enhance both learner competency and teacher instructional support in Mathematics education.

Statement of the Problem

This study aimed to determine the level of Mathematics competency skills among Grade 7 students and the extent of implementation of teachers' instructional support in the Schools Division of Batangas City as a basis for developing digital learning activities to enhance mathematics learning outcomes.

Specifically, it sought to answer the following questions:

1. How may the learners' level of Mathematics competency skills be assessed by the teachers in terms of:

Online ISSN: 3082-5121
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https://journals.aloysianpublications.com
Volume 2 Issue 7 (2026)

1.1 percentages;
1.2 performing operations on numbers;
1.3 converting units of measure; and
1.4 interpreting statistical graphs?

2. To what extent of implementation is the instructional support of the teachers be assessed relative to:

2.1 crafted supplementary worksheets;
2.2 tutorial sessions; and
2.3 mathematics simulation software?

3. Is there any significant relationship between the assessments on the level of skills of students on Mathematics competencies and on the extent of implementation of teachers' instructional support?

4. What challenges do teachers encounter in providing instructional support in Mathematics?

5. Based on the analysis of the study, what digital learning activities may be proposed?

Hypothesis

There is no significant relationship between the level of skills of students on Mathematical competencies and the extent of implementation of teachers' instructional support.

2. Materials and Methods

Research Design

This study utilized the descriptive research design to collect, analyze, and interpret data regarding present conditions and existing phenomena. It involved describing and comparing current situations to better understand the problems addressed in the study.

The quantitative approach is consistent with Creswell's (2023) view that quantitative research involves systematic collection and analysis of numerical data to measure variables, identify patterns, and examine relationships among variables. It emphasizes objectivity, statistical analysis, and the use of structured research instruments such as surveys, tests, and experiments to answer research questions and test theories. The descriptive design was deemed appropriate for this study as it aimed to assess learners' Mathematics competency skills and the instructional support provided by teachers without manipulating any variables.

Participants

The respondents of the study are Grade 7 Mathematics teachers from the Junior High School in the Division of Batangas City. In the division, there are 139 Mathematics teachers. 103

Online ISSN: 3082-5121
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https://journals.aloysianpublications.com
Volume 2 Issue 7 (2026)

out of them served as the respondents of the study, which was determined using the Raosoft Calculator with a 5% margin of error. The respondents were chosen using a stratified random sampling technique and applying proportionate allocation by district.

Instruments

The research-made questionnaires were used to gather the Mathematics learning competency attainment of Grade 7 learners assessed by the teachers, focusing on percentages, operations on rational numbers, converting units, operations with integers, and interpreting statistical graphs, and the extent of the implementation of intervention programs for Mathematics in Grade 7 learners in Batangas City.

However, to gain an in-depth knowledge of the use of intervention programs in mathematics instruction, the researcher will interview other Mathematics teachers to gather information and ideas.

Procedure

To gather the needed data from the respondents, the researcher sent approval letters to the Schools Division Superintendent of SDO-Batangas City. When the approval letter is returned, the researcher sent a letter to the school's principals attached to the approval letter from the SDS. With the school head's permission, the questionnaires were sent through a link and distributed to the mathematics coordinators of Junior High schools in Batangas City.

In any research study, obtaining informed consent from participants is of utmost importance. It ensures that the participants are fully aware of the purpose, procedures, and potential risks or benefits associated with the study. In this case, the researcher sought the informed consent of target teachers as a means of ensuring their voluntary participation in the study.

By obtaining informed consent, the researcher made sure every participant clearly understood what the research is about, what they were asked to do, how long it took, and any possible risks or benefits. This open conversation allows people to decide for themselves if they want to join, without any pressure. They can ask questions and are reminded that they're free to step away at any time if they feel uncomfortable. Taking this step shows respect for each person's rights and choices and helps build trust between the researcher and the participants. When everyone feels informed and valued, the study can move forward in a way that is honest and respectful to all involved.

To maintain confidentiality, which is crucial in any research endeavor, the researcher complied with the Data Privacy Act. This act ensures that personal information collected during research is protected and used only for its intended purpose. Confidentiality is essential as it encourages honest responses from participants without fear of judgment or repercussions.

Online ISSN: 3082-5121
Aloysian Interdisciplinary Journal of Social Sciences, Education, and Allied Fields
https://journals.aloysianpublications.com
Volume 2 Issue 7 (2026)

Data Analysis Plan

The data gathered in this descriptive quantitative research were analyzed using appropriate statistical tools to interpret the responses in alignment with the study's objectives. The data were compiled, organized, and tabulated to ensure clarity and facilitate understanding. These included ranking, weighted mean, Pearson's r product-moment correlation, including unstructured interview.

3. Results

Table 1. Learners' level of Mathematics competency skills, as assessed by teachers in Percentages

Items	WM	VI	Rank
1. find the percentage of a given quantity accurately.	2.73	SC	3
2. convert percentages to fractions and decimals.	2.16	MC	8.5
3. solve real-life problems involving percentages.	2.22	SC	7
4. compute for percentage increases and decreases.	2.65	MS	4
5. apply percentage in calculating discounts.	2.16	SC	8.5
6. find the original price using percentage discounts.	2.25	SC	6
7. understand and apply percentages in practical contexts.	2.46	SC	5
8. can compute simple interest using percentages.	2.92	MC	1
9. compare quantities using percentages.	2.74	MC	2
10. demonstrate confidence in solving percentage-related problems.	2.13	SC	10
Composite Mean	**2.44**	**SC**	

Legend: WM – Weighted Mean, VI – Verbal Interpretation
1.50-2.49 = Slightly Competent (SC), 2.50-3.49 = Moderately Competent (MC)

Table 2. Learners' level of Mathematics competency skills, as assessed by teachers in Performing Operations on Numbers

Items	Weighted mean	Verbal Interpretation	Rank
1. add and subtract fractions with unlike denominators accurately.	2.46	SC	6
2. multiply and divide fractions to solve routine word problems.	2.42	SC	7
3. convert fractions, decimals, and percentages with minimal difficulty.	2.48	SC	4.5
4. add, subtract, multiply, and divide decimals with accuracy.	2.48	SC	4.5
5. understand the place value system when	2.71	MC	1

Online ISSN: 3082-5121
Aloysian Interdisciplinary Journal of Social Sciences, Education, and Allied Fields
https://journals.aloysianpublications.com
Volume 2 Issue 7 (2026)

performing operations with decimals.			
6. apply integer rules when adding and subtracting positive and negative numbers.	2.13	SC	9
7. multiply and divide integers without frequent computational errors.	2.10	SC	10
8. choose appropriate strategies when solving multi-step problems involving fractions, decimals, and integers.	2.63	MC	2
9. explain their solutions when performing operations on rational numbers.	2.23	SC	8
10. demonstrate consistent mastery of operations on fractions, decimals, and integers during quizzes and exercises.	2.52	MC	3
Composite Mean	**2.42**	**SC**	

Legend: WM – Weighted Mean, VI – Verbal Interpretation
1.50-2.49 = Slightly Competent (SC), 2.50-3.49 = Moderately Competent (MC)

Table 3. Learners' level of Mathematics competency skills, as assessed by teachers in Converting Units of Measure

Items	Weighted mean	Verbal Interpretation	Rank
1. convert units of length accurately	2.13	SC	10
2. convert units of mass effectively	2.63	MC	1
3. convert units of time correctly	2.23	SC	8
4. convert between metric and customary units	2.57	MC	2
5. apply unit conversion in solving word problems	2.46	SC	6
6. use unit conversions in practical situations	2.47	SC	3
7. convert units of volume with accuracy	2.48	SC	4
8. convert units of area confidently	2.32	SC	7
9. relate unit conversions to real-life scenarios	2.14	SC	9
10. show proficiency in unit conversions in mathematics	2.52	MC	3
Composite Mean	**2.40**	**SC**	

Legend: WM – Weighted Mean, VI – Verbal Interpretation
1.50-2.49 = Slightly Competent (SC), 2.50-3.49 = Moderately Competent (MC)

Table 4. Learners' level of Mathematics competency skills, as assessed by teachers in Interpreting Statistical Graphs

Items	Weighted mean	Verbal Interpretation	Rank
1. identify and differentiate types of graphs	3.13	MC	1
2. read and extract data from bar	3.02	MC	4

Online ISSN: 3082-5121
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https://journals.aloysianpublications.com
Volume 2 Issue 7 (2026)

graphs			
3. interpret information from line graphs	3.03	MC	3
4. analyze data presented in pie graphs	2.85	MC	7
5. identify trends in graphs	3.01	MC	5
6. use graphs to answer mathematical questions	2.86	MC	6
7. construct simple graphs using given data	3.06	MC	2
8. draw conclusions from graphs	2.32	SC	8
9. compare and interpret data across graphs	2.18	SC	10
10. apply graph interpretation in real-life contexts	2.23	SC	9
Composite Mean	**2.77**	**MC**	

Legend: WM – Weighted Mean, VI – Verbal Interpretation
1.50-2.49 = Slightly Competent (SC), 2.50-3.49 = Moderately Competent (MC)

Table 5. Extent of implementation of the instructional support of the teachers in Crafted Supplementary Worksheet

Items	WM	VI	Rank
1. I prepare worksheets aligned with the current lesson.	2.13	SI	9
2. I provide worksheets to reinforce learning after class discussions.	3.53	HI	2
3. I use worksheets to provide additional practice for my students.	3.51	HI	3
4. I design worksheets that cater to varying learner abilities.	2.21	SI	8
5. I use worksheets for remedial and enrichment purposes.	2.32	SI	6
6. I incorporate real-life problems in the worksheets I prepare.	2.12	SI	10
7. I check and give feedback on completed worksheets promptly.	3.39	MI	5
8. I use worksheets to assess learning progress.	3.48	MI	4
9. I revise my worksheets regularly based on learners' needs.	2.23	SI	7
10. I encourage students to complete worksheets independently.	3.60	HI	1
Composite Mean	**2.85**	**MI**	

Legend: WM – Weighted Mean, VI – Verbal Interpretation
1.50-2.49 = Slightly Implemented (SI), 2.50-3.49 = Moderately implemented (MI), 3.50-4.00 = Highly Implemented (HI)

Online ISSN: 3082-5121
Aloysian Interdisciplinary Journal of Social Sciences, Education, and Allied Fields
https://journals.aloysianpublications.com
Volume 2 Issue 7 (2026)

Table 6. Extent of implementation of the instructional support of the teachers in Tutorial Sessions

Items	WM	VI	RANK
1. I conduct regular tutorial sessions for learners needing help.	2.32	SI	10
2. I identify students who require tutorials based on assessments.	3.24	MI	7
3. I prepare specific materials for tutorial sessions.	2.64	MI	8
4. I adjust my strategies based on learners' needs during tutorials.	3.55	HI	1
5. I encourage active participation during tutorials.	3.42	MI	4
6. I provide immediate feedback during tutorial sessions.	3.37	MI	5
7. I monitor the progress of learners attending tutorials.	3.47	MI	2
8. I use tutorials to address learning gaps identified during class.	2.43	SI	9
9. I encourage peer support during tutorials.	3.46	MI	3
10. I assess the effectiveness of my tutorial sessions regularly.	3.25	MI	6
Composite Mean	**3.12**	**MI**	

Legend: WM – Weighted Mean, VI – Verbal Interpretation
1.50-2.49 = Slightly Implemented (SI), 2.50-3.49 = Moderately implemented (MI), 3.50-4.00 = Highly Implemented (HI)

Table 7. Extent of implementation of the instructional support of the teachers in Mathematics Simulation Software

Items	WM	VI	Rank
1. I use mathematics simulation software to aid instruction.	2.9	MI	5
2. I demonstrate how to use simulations in solving math problems.	2.19	SI	10
3. I allow students to explore mathematics concepts using software.	3.01	MI	3
4. I choose appropriate simulations that align with lessons.	3.03	MI	2
5. I use simulations to visualize abstract mathematical concepts.	2.45	SI	6.5
6. I guide students while using simulation software.	2.32	SI	8.5
7. I evaluate the effectiveness of simulations in enhancing learning.	2.98	MI	4
8. I encourage students to use simulation tools for practice.	3.04	MI	1
9. I integrate simulations for interactive learning activities.	2.32	SI	8.5
10. I update my use of simulation tools based on student feedback.	2.45	MI	6.5
Composite Mean	**2.67**	**MI**	

Online ISSN: 3082-5121
Aloysian Interdisciplinary Journal of Social Sciences, Education, and Allied Fields
https://journals.aloysianpublications.com
Volume 2 Issue 7 (2026)

Legend: WM – Weighted Mean, VI – Verbal Interpretation
1.50-2.49 = Slightly Implemented (SI), 2.50-3.49 = Moderately implemented (MI)

Table 8. Relationship between students' percentage skills and teachers' instructional support implementation

Variable	p-values	Computed R-values	Interpretation	Decision	Verbal Interpretation
Crafted Supplementary Worksheets	.005	.246	Weak Positive Relationship	Reject	Significant
Tutorial Sessions	.000	.460	Moderate Positive Relationship	Reject	Significant
Mathematics Simulation Software	.000	.317	Moderate Positive Relationship	Reject	Significant

Coefficient of correlation (r): ±1.0 (Perfect relationship), +.76 to .99 (Very Strong relationship), ±.51 to .75 (Strong relationship), ±.26-.50 (Moderate Relationship, ±.11 to .25 (Weak relationship), ±.01 to .10 (Very weak relationship), .00 (No relationship)

Table 9. Relationship between students' skills in number operations and teachers' instructional support implementation

Variable	p-values	Computed R-values	Interpretation	Decision	Verbal Interpretation
Crafted Supplementary Worksheets	.141	.132	Weak Positive Relationship	Failed to Reject	Not Significant
Tutorial Sessions	.005	.250	Weak Positive Relationship	Reject	Significant
Mathematics Simulation Software	.000	.550	Strong Positive Relationship	Reject	Significant

Coefficient of correlation (r): ±1.0 (Perfect relationship), +.76 to .99 (Very Strong relationship), ±.51 to .75 (Strong relationship), ±.26-.50 (Moderate Relationship, ±.11 to .25 (Weak relationship), ±.01 to .10 (Very weak relationship), .00 (No relationship)

Table 10. Relationship between students' skills in unit conversion and teachers' instructional support implementation

Variable	p-values	Computed R-values	Interpretation	Decision	Verbal Interpretation
Crafted Supplementary Worksheets	.000	.385	Moderate Positive Relationship	Reject	Significant
Tutorial Sessions	.000	.521	Strong Positive Relationship	Reject	Significant
Mathematics Simulation Software	.000	.250	Weak Positive Relationship	Reject	Significant

Coefficient of correlation (r): ±1.0 (Perfect relationship), +.76 to .99 (Very Strong relationship), ±.51 to .75 (Strong relationship), ±.26-.50 (Moderate Relationship, ±.11 to .25 (Weak relationship), ±.01 to .10 (Very weak relationship), .00 (No relationship)

Online ISSN: 3082-5121
Aloysian Interdisciplinary Journal of Social Sciences, Education, and Allied Fields
https://journals.aloysianpublications.com
Volume 2 Issue 7 (2026)

Table 11. Relationship between students' skills in interpreting statistical graphs and teachers' instructional support implementation

Variable	p-values	Computed R-values	Interpretation	Decision	Verbal Interpretation
Crafted Supplementary Worksheets	.000	.552	Strong Positive Relationship	Reject	Significant
Tutorial Sessions	.000	.641	Strong Positive Relationship	Reject	Significant
Mathematics Simulation Software	.000	.558	Strong Positive Relationship	Reject	Significant

Coefficient of correlation (r): ±1.0 (Perfect relationship), +.76 to .99 (Very Strong relationship), ±.51 to .75 (Strong relationship), ±.26-.50 (Moderate Relationship, ±.11 to .25 (Weak relationship), ±.01 to .10 (Very weak relationship), .00 (No relationship)

Table 12. Challenges encountered by the teachers in providing instructional support in Mathematics

Items	WM	VI	Rank
1. I find it challenging to manage time when preparing instructional materials.	3.28	A	3
2. I have difficulty in integrating technology into teaching mathematics.	2.96	A	7
3. I encounter challenges in creating localized instructional materials.	3.17	A	10
4. I have difficulty maintaining learner engagement in math interventions.	3.22	A	5
5. I struggle with limited resources for implementing innovative strategies.	3.35	A	1
6. I experience challenges in addressing diverse learning needs in class.	3.15	A	6
7. I find it difficult to monitor individual learners' progress consistently.	2.87	A	8.5
8. I encounter challenges due to unstable internet connectivity during interventions.	2.87	A	8.5
9. I struggle to conduct consistent tutorial sessions due to time constraints.	3.25	A	4
10. I find it challenging to sustain learners' motivation in mathematics.	3.29	A	2
Composite Mean	**3.14**	**A**	

Legend: WM – Weighted Mean, VI – Verbal Interpretation, 2.50-3.49 = Agree (A)

4. Discussion

The research focused on assessing the learners' Mathematics competency skills and the instructional support provided by teachers among Grade 7 students in Batangas City. After careful and thorough analysis of the data gathered, the study yielded the following salient findings:

Online ISSN: 3082-5121
Aloysian Interdisciplinary Journal of Social Sciences, Education, and Allied Fields
https://journals.aloysianpublications.com
Volume 2 Issue 7 (2026)

1. Learners' level of Mathematics competency skills as assessed by teachers.

1.1 percentages. The findings show a generally low to moderate level of proficiency across the learners' Mathematics competencies in percentages, with most indicators falling under the "slightly competent" interpretation. The top three strengths are led by computing simple interest using percentages (2.92), followed by comparing quantities using percentages (2.74), and finding the percentage of a given quantity accurately (2.73). These results suggest that learners perform better in structured, procedural, and formula-based tasks, particularly those involving direct computation and guided mathematical processes.

Conversely, the three lowest-ranked competencies, though still within a slightly competent range, highlight areas that require further instructional support. These include demonstrating confidence in solving percentage-related problems (2.13), converting percentages to fractions and decimals (2.16), and applying percentages in calculating discounts (2.16). This pattern indicates that learners struggle more with conceptual flexibility, number form conversions, and confidence when dealing with percentage applications, especially in less structured tasks.

1.2 performing operations on numbers. The results indicate a generally low to moderate level of proficiency among learners in performing operations on numbers, with most competencies falling under the "slightly competent" interpretation. The top three strengths are led by understanding the place value system when performing operations with decimals (2.71), followed by choosing appropriate strategies when solving multi-step problems involving fractions, decimals, and integers (2.63), and demonstrating consistent mastery of operations on fractions, decimals, and integers during quizzes and exercises (2.52). These results indicate that learners perform better in structured, guided, and routine computational tasks, particularly when clear procedures and step-by-step solutions are involved.

In contrast, the three lowest-ranked competencies, though still interpreted as slightly competent, highlight key areas of difficulty. These include multiplying and dividing integers without frequent computational errors (2.10), applying integer rules when adding and subtracting positive and negative numbers (2.13), and explaining their solutions when performing operations on rational numbers (2.23). This suggests that learners struggle most with signed number operations, procedural accuracy in integer calculations, and articulating mathematical reasoning.

1.3 converting units of measure. The results reveal a generally low to moderate level of proficiency among learners in converting units of measure, with most competencies falling under the "slightly competent" interpretation. The top three strengths are led by converting units of mass effectively (2.63), followed by converting between metric and customary units (2.57), and showing above average performance in unit conversions in Mathematics (2.52). These results suggest that learners perform better in conversions involving familiar measurement systems and structured procedures, particularly when clear formulas and guided steps are provided.

Alternatively, the three lowest-ranked competencies, though still interpreted as slightly competent, highlight key areas of difficulty. These include converting units of length accurately (2.13), relating unit conversions to real-life scenarios (2.14), and converting units of time correctly (2.23). This indicates that learners struggle most with conversions involving multiple

Online ISSN: 3082-5121
Aloysian Interdisciplinary Journal of Social Sciences, Education, and Allied Fields
https://journals.aloysianpublications.com
Volume 2 Issue 7 (2026)

representations, abstract relationships between units, and applying concepts in contextual or practical situations.

1.4 interpreting statistical graphs. The evidence suggests a generally moderate level of proficiency among learners in interpreting statistical graphs, with competencies ranging from moderately competent to slightly competent. The top three strengths are led by identifying and differentiating types of graphs (3.13), followed by constructing simple graphs using given data (3.06), and interpreting information from line graphs (3.03). These results indicate that learners are more competent in recognizing graph forms, organizing data visually, and interpreting straightforward trends, especially when tasks are structured and clearly guided.

In comparison, the three lowest-ranked competencies, though still interpreted as slightly competent, highlight areas of difficulty. These include comparing and interpreting data across graphs (2.18), applying graph interpretation in real-life contexts (2.23), and drawing conclusions from graphs (2.32). This suggests that learners struggle most with higher-order thinking skills such as synthesizing information, applying knowledge to real-world situations, and making data-based inferences.

2. Extent of implementation of the instructional support of the teachers.

2.1 crafted supplementary worksheets. The outcomes indicate a generally moderate level of implementation of crafted supplementary worksheets in Mathematics instruction, with practices ranging from highly implemented to slightly implemented. The top three strengths are led by encouraging students to complete worksheets independently (3.60), followed by providing worksheets to reinforce learning after class discussions (3.53), and using worksheets to provide additional practice for students (3.51). These results indicate that teachers strongly emphasize independent learning, reinforcement, and repeated practice, highlighting worksheets as effective tools for strengthening procedural mastery and student autonomy.

Whereas, the three lowest-ranked practices, though still interpreted as slightly implemented, point to areas needing improvement. These include incorporating real-life problems in worksheets (2.12), preparing worksheets aligned with the current lesson (2.13), and designing worksheets that cater to varying learner abilities (2.21). This suggests that worksheets are less frequently contextualized, not always fully aligned with lesson objectives, and insufficiently differentiated to address diverse learner needs.

2.2 tutorial sessions. The findings reveal a generally moderate level of implementation of tutorial sessions in Mathematics instruction, with practices ranging from slightly implemented to highly implemented. The top three strengths are led by adjusting strategies based on learners' needs during tutorials (3.55), followed by monitoring the progress of learners attending tutorials (3.47), and encouraging peer support during tutorials (3.46). These results indicate that teachers are responsive to learner needs during tutorials, actively track learner progress, and promote collaborative learning, which helps enhance understanding through guided and peer-assisted instruction.

While, the two lowest-ranked practices, both interpreted as slightly implemented, highlight key areas of concern. These include conducting regular tutorial sessions for learners needing help (2.32) and using tutorials to address learning gaps identified during class (2.43).

Online ISSN: 3082-5121
Aloysian Interdisciplinary Journal of Social Sciences, Education, and Allied Fields
https://journals.aloysianpublications.com
Volume 2 Issue 7 (2026)

This suggests that although tutorials are beneficial, they are not consistently implemented nor fully maximized as a systematic intervention for remediation.

2.3 mathematics simulation software. The results demonstrate a generally moderate level of implementation of mathematics simulation software in teaching, with practices ranging from slightly implemented to moderately implemented. The top three strengths are led by encouraging students to use simulation tools for practice (3.04), followed by choosing appropriate simulations that align with lessons (3.03), and allowing students to explore mathematics concepts using software (3.01). These results indicate that teachers primarily support student engagement with simulation tools for independent exploration and practice and are also mindful of aligning digital tools with lesson objectives.

Alternatively, the three lowest-ranked practices, all interpreted as slightly implemented, highlight key implementation gaps. These include demonstrating how to use simulations in solving math problems (2.19), guiding students while using simulation software (2.32), and integrating simulations for interactive learning activities (2.32). This suggests that learners receive limited teacher modeling and support when using simulation tools, and that simulations are not yet fully integrated into interactive or collaborative classroom activities.

3. Relationship between the assessments on the level of skills of students on Mathematics competencies and on the extent of implementation of teachers' instructional support. The study reveals a significant relationship between student skill levels in percentages, unit conversion, and graph interpretation, and the implementation of all three instructional supports: supplementary worksheets, tutorials, and simulation software. Similarly, student performance in numerical operations is significantly linked to teacher support through tutorial sessions and simulation software, highlighting the targeted impact of these specific interventions.

4. Challenges met by Mathematics teachers in providing instructional support. The study identifies that the primary challenges in providing Grade 7 Mathematics support are limited resources for innovation, sustaining learner motivation, and time management for material preparation. These issues, all leading to "Agree" interpretations with means ranging from 3.28 to 3.35, highlight the significant institutional challenges teachers face in delivering effective instructional support.

5. Proposed Digital Learning Activity. The proposed output is designed for Grade 7 students to deepen their understanding of Mathematics. This also aims to improve the mathematics competency skills of Grade 7 students by enhancing teachers' instructional support through a centralized online repository of learning resources called Numera.

5. Conclusion

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

1. Grade 7 learners exhibited slight competence in most Mathematics competencies, except for interpreting statistical graphs, where they performed moderate competence.

2. Teachers' instructional support was assessed as moderately implemented in the findings.

Online ISSN: 3082-5121
Aloysian Interdisciplinary Journal of Social Sciences, Education, and Allied Fields
https://journals.aloysianpublications.com
Volume 2 Issue 7 (2026)

3. Significant relationship exists between the assessment of the level of learners' Mathematics skills and the teachers' instructional support.

4. Teachers faced challenges such as limited resources, low learner motivation, and time constraints.

5. The proposed Numera digital learning activity platform aims to enhance learners' skills and strengthen teachers' instructional support through organized and accessible resources.

Based on the conclusions drawn, the following recommendations were given:

1. Mathematics teachers and school administrators should strengthen instructional practices to improve learners' developing skills. Teachers are encouraged to attend professional development programs and training courses focused on effective strategies in teaching percentages, operations on numbers, and measurement conversions.

2. Math Teachers may enhance the implementation of instructional support strategies such as crafted supplementary worksheets, tutorials, and mathematics simulation software. These strategies may be used more consistently to help learners better understand mathematical concepts and improve their competency skills.

3. Teachers may continuously assess and evaluate the effectiveness of instructional support through formative assessments, monitoring of student progress, and collaboration with fellow educators to ensure that appropriate teaching strategies are applied to address learners' needs in Mathematics.

4. School administrators may provide adequate support and resources to help teachers overcome challenges such as limited instructional materials, difficulty in sustaining learner motivation, and time constraints in preparing teaching resources. Providing access to digital tools and instructional materials may improve the delivery of Mathematics instruction.

5. Teachers may develop and use innovative learning materials such as digital tools like Numera, worksheets, and simulations to help students practice Mathematics skills inside and outside the classroom. These resources can strengthen understanding and improve learners' performance in Mathematics.

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