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Instructional supervision in mathematics under the MATATAG Framework: Their influence on Grade 7 students' mathematics performance

Eduard Aguillon Nerja *

Burauen Comprehensive National High School, Sto. Niño Street, Burauen, Leyte, Cebu Technological University, M.J. Cuenco Avenue corner R. Palma Street, Cebu City, Philippines.

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Abstract

This study examined the influence of instructional supervision in Mathematics under MATATAG Framework on the Mathematics performance of Grade 7 students at Burauen Comprehensive National High School for the school year 2025–2026, with the goal of informing improvements in supervisory practices. Most teacher respondents were aged 31 to 50, predominantly male, with balanced marital status, master's units, and over six years of teaching experience. They generally received "Very Satisfactory" ratings and had attended division-level training relevant to Mathematics instruction. The results showed that instructional supervision was implemented to a very high extent. Teachers strongly agreed that their instructional activities were aligned with curriculum standards, appropriate assessment and feedback strategies were used to improve instruction and received technical assistance and professional development opportunities. In terms of student outcomes, most Grade 7 learners performed well in Mathematics, attaining mastery or near mastery in competencies such as identifying angle relationships, classifying polygons, and determining angle measures. However, some students still lacked mastery in certain areas, indicating a need for support. A significant relationship was found between the extent of instructional supervision and students' Mathematics performance, highlighting the positive impact of effective supervision on academic outcomes. Despite this, several challenges were identified, including insufficient time for regular supervision, limited training, heavy workloads, unclear guidelines, and misalignment between materials and updated standards. In conclusion, the study affirms that strong instructional supervision, particularly under the MATATAG Framework, supports improved teaching and learning in Mathematics.

Keywords: Administration and Supervision; Instructional Supervision; Mathematics Performance; MATATAG Framework

1. Introduction

In today's changing educational world, the quality of teaching in the classroom greatly affects how students perform. In the Philippines, Mathematics is known as a difficult subject. Many students show low skills in national and international assessments. This ongoing poor performance calls for a closer look at how teaching and learning happen, especially how the curriculum and lessons are carried out and managed. As the Department of Education works on reforms, studying how strategies like instructional supervision and curriculum alignment influence students' learning in Math becomes important.

The MATATAG Curriculum Framework, introduced by Department of Education (DepEd), provides more relevant content. It emphasizes clear learning goals, improved teaching quality, and better support for teachers. The reform stresses the need to match what is taught, what should be taught, and what is tested. But, for this framework to succeed, it's not only about policies. How supervision and leadership practices are put into practice in schools also matter. Without good supervision, the goals of the MATATAG curriculum would not be achieved.

* Corresponding author: Eduard Aguillon Nerja

Instructional supervision helps ensure that teachers follow curriculum standards. It also provides teachers with feedback and guidance to improve. Good supervision boosts teachers' skills, encourages self-reflection, and promotes accountability. When monitoring and support are weak or missing, teachers may struggle to handle new curriculum demands. This can result in poorly organized lessons and lower student learning. Therefore, it's important to look at the quality and extent of supervision to see how it relates to student performance.

Curriculum alignment makes sure classroom lessons match what the curriculum expects. When lessons, activities, and assessments closely follow the curriculum, students are more likely to meet educational standards. If there are misalignments, due to lack of resources, training, or proper instruction, students' learning results can vary. This is especially true for complex subjects like Mathematics. So, examining how well teaching practices match the MATATAG Framework can give us an idea of how effectively the curriculum is being delivered and what challenges might block student success.

Grade 7 plays a critical role in applying the MATATAG curriculum. It prepares students for junior high school. At this stage, students should build a strong understanding of key Mathematics concepts and skills, supporting their future studies. Good performance in Mathematics in Grade 7 helps students succeed in STEM (Science, Technology, Engineering, and Math) fields and develops higher thinking skills. But many students still find the subject difficult, which might be linked to how the curriculum is executed and supported through supervision. By exploring how supervision and curriculum alignment affect student results, this study aims to connect curriculum goals with what actually happens in the classroom.

This study is conducted to find out how instructional supervision and curriculum alignment under the MATATAG Framework influence Grade 7 students' Mathematics performance. The goal is to gather data that can help create an enhanced instructional supervisory plan. This plan hopes to improve how the curriculum is put into practice and how teachers deliver lessons. In the long run, it aims to help raise student achievement and support education reforms in the Philippines.

1.1. Statement of the Problem

This study determined the influence of instructional supervision in Mathematics under MATATAG Framework in the performance of Grade 7 students at Burauen Comprehensive National High School in Burauen, Leyte during the school year 2025–2026 as basis for an enhanced instructional supervision for Mathematics.

Specifically, it answered the following inquiries:

- What relevant information can be taken from:
    - Teachers'
        - Age and gender;
        - Civil status;
        - Highest educational attainment;
        - Length of service;
        - Performance rating;
        - Relevant appropriate training, seminars and workshops;
    - Students' age and gender?
- As perceived by the respondent groups, what is the extent of instructional supervision in Mathematics based on the following MATATAG features:
    - Alignment of teaching-learning activities with the curriculum standards;
    - Utilization of appropriate assessment and feedback strategies to improve instruction and
    - Provision of technical assistance and professional development to enhance teaching practices?
- What is the level of performance of the Grade 7 students in terms of the following competencies in Mathematics:
    - Describe and explain the relationships between angle pairs based on their measures;
        - Identify whether the given angle pairs are supplementary or complementary;
        - Given the measures, find the complement of the angles;
        - Given the measures, find the supplement of the angles.
    - Classify polygons according to the number of sides, whether they are regular or irregular, and whether they are convex or non-convex;
        - Classify if polygons or not;
        - Classify polygons according to number of sides;
        - Classify the polygons as to convex or non-convex.

- Determine the measures of angles and the number of sides of polygons?
  - Determine the number of sides of the polygon;
  - Determine the measure of the exterior angles;
  - Determine the measure of adjacent interior angles.
- Is there a significant relationship between the extent of instructional supervision of teachers and the Mathematics performance of students?
- What issues and concerns are encountered by teachers in the implementation of instructional supervision in Mathematics under MATATAG Framework?
- Based on the findings, what enhanced instructional supervision for Mathematics MATATAG-Based instruction can be designed?

1.2. Statement of Null Hypothesis

Ho1. There is no significant relationship between the extent of instructional supervision of teachers and the Mathematics performance of students.

2. Research Methodology

This section describes the analysis methods, including the approach, sample type, test site, participants, testing tools, data collection methods, data processing, ranking methods, and terminology descriptions.

2.1. Design

This study used a descriptive research method with a modified standardized questionnaire to gather important data relevant to the study. A descriptive correlational study is a study that looks at relationships between variables without trying to establish a causal connection.

2.2. Flow of Study

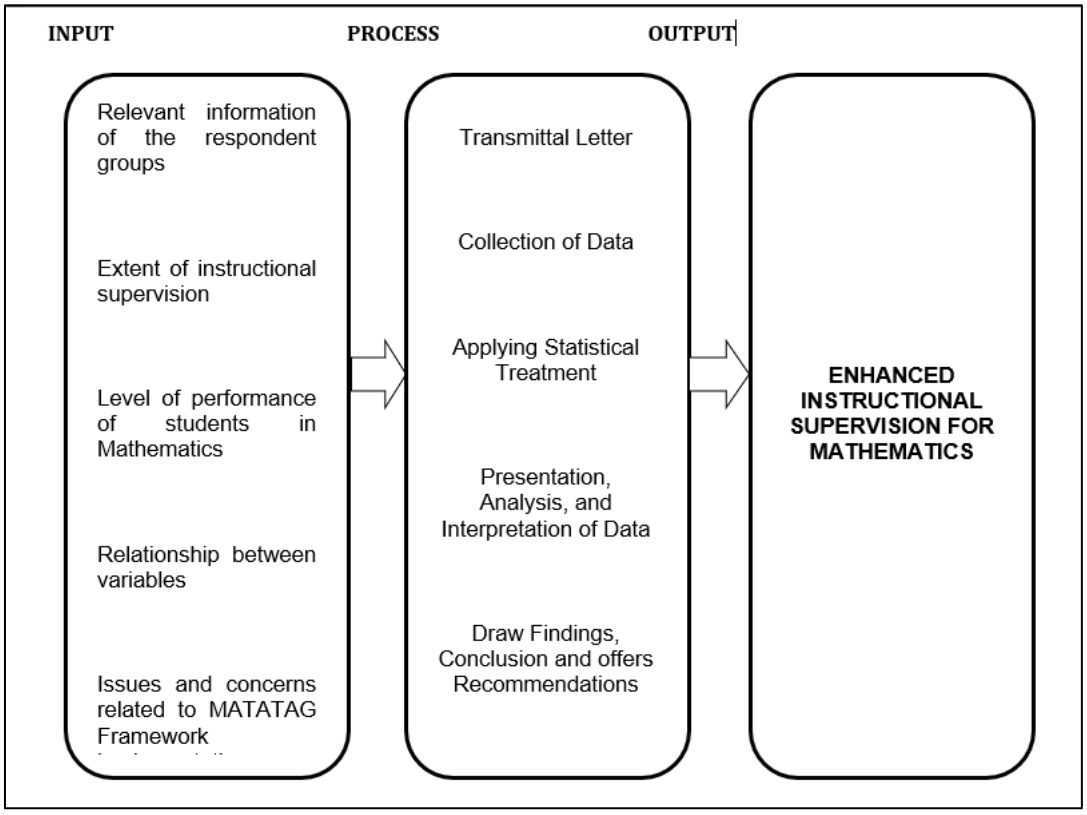

Figure 1 The Flow of the Study

The study collected information about the respondents, including age, gender, civil status, highest educational level, years of service, performance ratings, and relevant training, seminars, or workshops attended. This also includes the

level of instructional supervision and how well the curriculum aligns with the MATATAG Framework. It looks at how teaching activities match curriculum standards, how assessment and feedback are used to improve teaching, and the support provided for professional growth.

Also, the study measured Grade 7 students' performance in Math, focusing on specific skills. It also examined the link between instructional supervision, curriculum alignment under the MATATAG Framework, and students' mathematics performance.

Lastly, the issues and concerns encountered by teachers in the implementation of instructional supervision and ensuring curriculum alignment under the MATATAG Framework were also included.

The process of the study included the research procedure that was strictly followed guided by the research approach it employed which was the descriptive-correlational method of research.

The output of the study was the enhanced instructional supervision for Mathematics.

2.3. Respondents

The respondents of the study were the teachers and students of Burauen Comprehensive National High School. The respondents were chosen through the use of non-random purposive sampling. The inclusion criteria were as follows: a] that they are teachers and students in the research locale, b] that they have been in the profession for more than a year and c] that they are willing to participate and cooperate in the said undertaking.

The Grade 7 students were one of the respondents of this study since their age and gender were taken into consideration.

Table 1 shows the distribution of respondents.

Table 1 Distribution of Respondents

Respondents	Respondents	
	Frequency	Percentage
Teachers	10	9
Students	100	91
Total	110	100

2.4. Instrument

The main data-gathering tool for this study is a modified standardized questionnaire designed to assess the extent of instructional supervision which includes the curriculum alignment under the MATATAG Curriculum Framework, and their influence on the Mathematics performance of Grade 7 students. The construction of the instrument was guided by recent literature, DepEd policies, and the MATATAG Framework to ensure content validity and relevance.

The questionnaire is composed of four parts. Part I gathers the profile of the teacher and student respondents, including age, gender, educational background, teaching experience, performance rating, and relevant training attended. Part II measures the extent of instructional supervision and curriculum alignment based on three indicators: alignment of teaching-learning activities with curriculum standards, utilization of appropriate assessment and feedback strategies, and provision of technical assistance and professional development. Responses are rated on a five-point Likert scale ranging from Strongly Disagree to Strongly Agree.

Part III evaluates the level of Mathematics performance of students across key Grade 7 competencies, using performance levels such as Attained Mastery, Near Mastery, Lacks Mastery, and No Mastery.

Part IV identifies the issues and concerns encountered by teachers in the implementation of instructional supervision and curriculum alignment.

To ensure reliability and appropriateness, the instrument was validated by education professionals and subject matter experts prior to its administration.

2.5. Data Gathering Procedure

In the gathering of data, this researcher followed a step-by-step process.

First, a letter was made address to the Burauen East District Supervisor and Principal of Burauen Comprehensive National High School for approval of the conduct of the study.

After the letter was approved, the questionnaires were personally distributed to the respondents. The respondents were given ample time of 15-20 minutes to answer the questionnaire.

Data was then collected and subjected to further presentation, analysis, and interpretation of data.

The final draft was submitted for finalization and corrections.

2.6. Statistical Treatment of Data

The answers of the respondents were subjected to statistical treatment with the use of the different non-parametric measures:

- **Simple Percentage.** This statistical treatment determined the relevant information taken from teachers' age and gender, civil status, highest educational attainment, number of years in service, performance rating and relevant training, seminars and workshops attended as well as the learners' relevant information.
- **Weighted Mean**. Computation of the mean was employed to assess the extent of instructional supervision and curriculum alignment under the MATATAG Framework based on the alignment of teaching-learning activities with the curriculum standards; utilization of appropriate assessment and feedback strategies to improve instruction and the provision of technical assistance and professional development to enhance teaching practices.
- **Chi-square**. This statistical treatment determined whether there is a relationship between the extent of instructional supervision and curriculum alignment under the MATATAG Framework and the Mathematics performance of students.
- **Scoring Procedure.** The following were the parametric limits of the study:

Table 2 Scoring Procedure

Weight	Range	Response Category	Verbal Description
5	4.21 - 5.00	Strongly Agree	This means that the respondent strongly agree that the practice or condition is consistently evident
4	3.41 – 4.20	Agree	This means that the respondent agree that the practice or condition is frequently evident
3	2.61 – 3.40	Neutral	This means that the respondent is uncertain or see the practice or condition only occasionally
2	1.81 – 2.60	Disagree	This means that the respondent disagree that the practice or condition is generally present
1	1.00 - 1.80	Strongly Disagree	This means that the respondent strongly disagree that the practice or condition is evident at all

3. Results and Discussion

Alignment of Teaching-Learning Activities with the Curriculum Standards. This refers to the support and interventions provided by school heads or supervisors to improve instructional practices. It includes mentoring, coaching, sharing of teaching strategies, and other forms of professional guidance to ensure quality instruction.

Overall, the findings emphasize that instructional supervision has positively influenced the alignment of teaching-learning activities with curriculum standards. The consistently high ratings validate that teachers are not working in isolation but are guided by structured and standards-based instructional support mechanisms. This supports the assertion of Villanueva and Carreon (2021) that robust instructional supervision results in curriculum alignment, which is pivotal in ensuring improved learner performance and overall school effectiveness. As the education sector continues to adapt to curriculum enhancements like the MATATAG Framework, instructional supervision remains a crucial lever in sustaining educational quality and relevance.

Utilization of Appropriate Assessment and Feedback Strategies to Improve Instruction. These are the methods used by teachers to evaluate student learning and provide constructive feedback. Effective use of assessments ensures that teaching is responsive to students' needs and aligned with curriculum standards.

Overall, the findings affirm that instructional supervision fosters the effective use of assessment and feedback strategies that are aligned with curriculum standards and learner needs. The strong agreement among respondents on most items indicates that assessment is viewed not just as a compliance requirement but as an integral part of the teaching-learning process. As affirmed by Dominguez and Lopez (2023), effective supervision enhances teachers' assessment competence, ultimately contributing to improved student learning outcomes and instructional quality.

Provision of Technical Assistance and Professional Development to Enhance Teaching Practices. This refers to training programs, workshops, and learning sessions aimed at enhancing teachers' competencies in curriculum implementation and pedagogy. In this study, it is considered an essential component of instructional supervision under the MATATAG Framework.

Overall, the data affirms that technical assistance and professional development are integral elements of instructional supervision under the MATATAG Framework. Teachers perceive high levels of support in both formal and informal professional learning structures. These findings are consistent with the conclusions of Reyes and Alonte (2023), who argued that sustained and school-based professional development leads to measurable improvements in instructional quality and learner achievement. Instructional leaders must therefore continue to prioritize collaborative, needs-based, and context-sensitive development programs to uphold a culture of continuous improvement in teaching practices.

Summary on the Extent of Instructional Supervision. This section indicates the summary on the extent of instructional supervision as perceived by the respondents in terms of alignment of alignment of teaching-learning activities with the curriculum standards, utilization of appropriate assessment and feedback strategies to improve instruction, and provision of technical assistance and professional development to enhance teaching practices.

The data reinforces the notion that instructional supervision must be multi-faceted, addressing not only what is taught but how it is taught, assessed, and supported. When supervision integrates these components effectively, it helps create a more coherent, responsive, and dynamic learning environment that meets the needs of both teachers and learners.

Overall, the grand mean of 4.6 confirms that the respondents strongly agree with the positive extent of instructional supervision in their schools. This favorable perception supports the idea that ongoing supervisory support, when structured and strategically implemented, contributes significantly to raising the standards of teaching and learning in basic education.

Extent of Instructional Supervision and Level of Mathematics Performance. In conclusion, the statistical results confirm that the extent of instructional supervision is significantly related to students' Mathematics performance. As such, the findings underscore the importance of robust and supportive supervision practices that go beyond compliance and toward continuous professional growth. Schools are encouraged to institutionalize effective supervision systems that are collaborative, developmental, and data driven. Doing so will likely foster a more competent teaching force and improved academic achievement, echoing the call of Hernandez and Cruz (2023) for sustainable instructional leadership practices in the post-pandemic educational landscape.

3.1. Summary

This study determined the influence of instructional supervision in Mathematics performance of Grade 7 students at Burauen Comprehensive National High School in Burauen, Leyte during the school year 2025–2026 as basis for an enhanced instructional supervision for Mathematics. This study used a descriptive research method with a modified standardized questionnaire to gather important data relevant to the study. A descriptive correlational study is a study that looks at relationships between variables without trying to establish a causal connection.

3.2. Findings

Most of the teacher respondents were aged 31 to 50, with more males than females and an equal number of married and single individuals. The majority had units toward a master's degree and over six years of teaching experience. Most received a "Very Satisfactory" performance rating and had attended relevant training mainly at the division level.

The findings reveal that instructional supervision was implemented to a very high extent. Teachers strongly agreed that their teaching and learning activities were well-aligned with curriculum standards, and that appropriate assessment and feedback strategies were consistently utilized to enhance instruction. Additionally, technical assistance and professional development were actively provided, supporting the continuous improvement of teaching practices.

The findings also indicate that most Grade 7 students performed well in Mathematics, with many attaining or nearing mastery in key competencies. They showed proficiency in identifying angle relationships, classifying polygons, and determining angle measures and sides. However, some students still lacked mastery in specific areas, suggesting the need for targeted support.

The findings, likewise, reveal a significant relationship between the extent of instructional supervision and the Mathematics performance of Grade 7 students. This suggests that stronger and more consistent instructional supervision is positively associated with better student outcomes in Mathematics.

Moreover, the findings highlight key challenges in implementing instructional supervision and curriculum alignment under the MATATAG Framework. These include limited time for supervision, inadequate training, and heavy teaching loads. Other concerns involve lack of clear guidelines, insufficient feedback from observations, and misalignment of teaching materials with updated standards.

4. Conclusion

In conclusion, the study shows that instructional supervision under the MATATAG Framework is being carried out mostly as planned. It especially focuses on matching teaching activities with curriculum standards, using proper assessment methods, and offering professional development. This strong effort is linked to the generally high Math scores among Grade 7 students, with most learners reaching or coming close to mastery in key skills. The connection between supervision and student results emphasizes how important good supervision is for improving learning outcomes.

However, the study also points out several problems that limit the full effectiveness of supervision and curriculum alignment. These include limited time for supervision, lack of enough training on the MATATAG curriculum, and heavy teaching loads that make planning and collaboration difficult. Other issues involve unclear guidelines, inconsistent feedback, and materials that don't fully match the latest standards. Fixing these problems is essential for keeping and improving the quality of teaching and student success.

Recommendation

Based on this study, it is suggested that the school leaders improve supervision by setting regular times for classroom visits and feedback sessions. Teachers should also have more professional development, especially on the MATATAG curriculum, so they can learn new strategies and content. Teachers' workloads should be reduced to give them more time for lesson planning and teamwork. Clear instructions and materials that match the curriculum standards should also be provided to support better teaching and improve students' Math learning.

Compliance with ethical standards

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Statement of informed consent

"Informed consent was obtained from all individual participants included in the study."

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