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MATATAG Curriculum: Challenges Experienced by Math Teachers and Students' Academic Performance in the Initial Implementation

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Abstract

The implementation of the MATATAG Curriculum poses challenges that significantly affect the quality of teaching and learning. Teachers faced challenges such as complicated content in the curriculum, limited opportunities for professional learning, a lack of resources, including instructional materials and technology, and proper assessment and evaluation. This study aimed to evaluate the challenges experienced by Mathematics teachers in the initial implementation of the MATATAG Curriculum (School Year 2024-2025) in the Schools Division of Bulacan, covering Grades 1, 4, and 7. It also sought to describe the implications of these challenges on instructional delivery and to examine whether teachers from the three grade levels had noticeably different experiences. The study utilized a quantitative research design involving 738 Mathematics teachers selected through stratified random sampling. Data were collected using a researcher-developed survey focusing on Content and Structure, Teacher Readiness and Professional Development, Availability of Resources, and Assessment and Evaluation. Results revealed that Mathematics teachers faced challenges with content and structure, limited training, and insufficient opportunities for collaboration, all of which affected their professional growth. Resource availability was a major constraint, particularly for early grade levels. Assessment practices were also difficult due to the lack of training in developing rubrics and implementing competency-based evaluation. While challenges were consistent across grade levels, no significant relationship was found between reported challenges and student performance, suggesting that teacher motivation and commitment helped maintain learning outcomes despite implementation difficulties.

Keywords

MATATAG Curriculum, Challenges, Academic Performance.

Introduction

The MATATAG Curriculum has marked a significant change in the Philippine education system, addressing gaps in the K to 12 curriculum and responding to rapid societal, technological, and global changes (Estrellado, 2024). It reduced content overload by focusing on foundational skills

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and human-centered learning, aimed to develop students holistically and equip them with skills needed for the 21st century. The inclusion of technological and engineering literacy ties education with the demands of the Industrial Revolutions 4.0 and 5.0 (Diquito, 2024), ensuring that learning is relevant as the global economy evolves.
This curriculum also aimed to address the longstanding issue of educational imbalances and improve students' performance in both national and international assessments (Balansag et al., 2024). Promoting literacy, global awareness, and the localization and contextualization of instructional resources enhances students' academic performance and real-life skills. However, the MATATAG Curriculum faces several issues concerning implementation (e.g., long-term teacher assistance), teachers' development, and teachers' collaboration with fellow teachers, parents, and other educational partners. Dealing with these issues successfully is likely to require continued feedback, the common-sense use of resources, and stakeholders' involvement to carry out and sustain a positive change to the curriculum.

The Philippines has introduced the MATATAG Curriculum reform to improve math education. It reduces the number of competencies that the students need to study in math, enabling them to engage more actively. This helps students develop a better understanding of math, apply it in real-world situations, and be more engaged with it, thereby addressing negative perceptions of math and its resulting negative impact on student performance (Sikdar, 2024). The MATATAG Curriculum enhances students' desire to engage with and feel positively toward the subject by making math more relevant to their lives and developing their critical thinking and problem-solving skills. Therefore, the way mathematics is taught under the MATATAG Curriculum depends on how the curriculum is developed, how to properly develop effective implementation strategies linked to the curriculum, and how to develop ongoing supports for teachers.

Student learning performance, particularly in mathematics, is vital for assessing the effectiveness of the curriculum. Other research has shown that quality teaching leads to improved student performance. Additionally, research has found that flexible, responsive curriculum structures, such as the MATATAG Curriculum, are associated with higher levels of understanding of mathematical knowledge (Liu, 2023). A rigidly structured curriculum can inhibit students' cognitive and creative development, thereby reducing their engagement in mathematics (Judijanto et al., 2024). These confounding factors may result in poor pedagogical practice and lower levels of student engagement and success in mathematics.

This study was conducted to evaluate the challenges faced by Mathematics teachers during the initial implementation of the MATATAG Curriculum (School Year 2024-2025) in the Schools Division of Bulacan, covering grades 1, 4, and 7. The study also intended to describe the implications of the challenges for instructional delivery and, likewise, to examine whether teachers across the three grade levels had noticeably different experiences. The study intended to assess how all students were performing in mathematics at that time and whether teacher challenges were related to student performance on outcomes. Eventually, this might help improve curriculum implementation and support for teachers.

Research Questions

The researcher aimed to explore how Mathematics teachers in the Schools Division of Bulacan identify and describe the challenges encountered in the initial implementation of the MATATAG Curriculum.

Specifically, the researcher sought answers to the following questions:

1. What are the key challenges faced by Mathematics teachers in the implementation of the MATATAG Curriculum in terms of:
    1.1. Curriculum and Content Structure;
    1.2. Teacher Readiness and Professional Development;
    1.3. Resource Availability; and
    1.4. Assessment and Evaluation?
2. How do the challenges encountered by Mathematics teachers in the implementation of the MATATAG Curriculum differ when comparing teachers across Grades 1, 4, and 7?
3. What overall trends in student grades can be observed at the end of the initial implementation of the MATATAG Curriculum?
4. Is there a significant relationship between the challenges teachers face during the initial implementation of the MATATAG Curriculum and students' overall grades?

Methodology

The study used a quantitative research design to identify the challenges that Mathematics teachers faced during the initial implementation of the MATATAG Curriculum. A descriptive research design was used to describe the challenges experienced by teachers across grade levels (Grades 1, 4, and 7), and inferential statistics were used to identify statistically significant differences among the three grade groups. The study also used a correlational analysis to identify associations between the perceived challenges experienced by Mathematics teachers and students' academic achievement in Mathematics.

The sample for this study consisted of Mathematics teachers from the Schools Division Office of Bulacan teaching Grades 1, 4, and 7. From a total population of 2,748 teachers (Grade 1 = 1,296; Grade 4 = 1,209; Grade 7 = 243), 738 respondents were selected (Grade 1 = 297; Grade 4 = 292; Grade 7 = 149). Stratified random sampling was employed to ensure proportional representation (Nguyen et al., 2021), and the minimum sample size was determined using the Qualtrics calculator to ensure the validity of the research findings (Memon et al., 2020).

A researcher-developed questionnaire (teacher demographics, student Mathematics final grades, and perceived implementation challenges) was used to collect data. The overall grades were treated as continuous data, allowing them to be analyzed using parametric methods. Perceived implementation challenges were measured on a 5-point Likert-type scale, a common and effective approach for collecting this type of data (Pescaroli et al., 2020; Kusmaryono et al., 2022; Joshi et al., 2020). The domains used in the questionnaire are Curriculum & Content Structure, Teacher Readiness & Professional Development, Resource Availability, and Assessment & Evaluation,

and were aligned with DepEd Order No. 010, s. 2024. The measure was subsequently validated by experts and had a reliability of 0.89 (Cronbach's Alpha).

Descriptive statistics summarized the data collected; differences (i.e., statistics) between each of the providing groups were determined using ANOVA (Field, 2018; Chatzi & Doody, 2023); mean percentages were used to examine trends in student performance; and Pearson's r was calculated to show strength and direction of relationship(s) between the perceived challenges expressed by the teachers and student achievement (Ai, 2022).

Results and Discussion

Mathematics teachers encountered challenges during the initial implementation of the MATATAG Curriculum. The challenges in the curriculum and content structure (M = 3.56) were rated as highly challenging by the teachers, who noted the significant number of topics prescribed to them, the time constraints for teaching the content, the additional burden of preparing lessons, and the reorganization of the competencies. This data suggests an increasing need to develop and improve both the curriculum and instructional support. Regarding teacher readiness and professional development (M = 3.32), teachers' challenges were rated "somewhat challenging." However, many of the responses were reported as neutral or not overwhelming. In terms of instructional changes, many teachers felt overwhelmed by rapid change and expressed lower confidence in their ability to assess higher-order thinking. The majority of teachers recognized that peer collaboration was important but required more training, indicating the value of long-term, structured professional development.

Table 1. Challenges Experienced by the Teachers in the Initial Implementation of the MATATAG Curriculum

Teacher's Challenges	Mean	Standard Deviation	Qualitative Description	Verbal Interpretation
Curriculum and Content, and Structure	3.56	0.024	Agree	Challenging
Teacher Readiness and Professional Development	3.32	0.024	Neutral	Somewhat Challenging
Resource Availability	3.46	0.027	Neutral	Somewhat Challenging
Assessment and Evaluation	3.53	0.023	Agree	Challenging
Overall Mean and Standard Deviation	3.47	0.025	Neutral	Somewhat Challenging

Note: 4.50-5.00 - Strongly Agree / Very Challenging; 3.50- 4.49 – Agree / Challenging; 2.50-3.49 – Neutral/ Somewhat Challenging; 1.50-2.49 – Disagree / Slightly Challenging; 1.00-1.49 - Strongly Disagree / Not Challenging

Contributing to Resource Availability (M = 3.46), teachers' moderate agreement that limited resources create challenges indicated that the lack of classroom materials and the need to develop curriculum-based resources were significant challenges. Given the low standard deviation, these challenges were systemic rather than isolated, indicating the need for institutional support. And with respect to Assessment and Evaluation (M = 3.53), the competency-based assessment approach posed a challenge for teachers in creating assessment tools that measure students' critical thinking and problem-solving abilities. Teachers also believed there was a need for more support to align assessments with higher-order objectives and to ensure fairness in assessments, given that

no specific criteria were provided. As evidenced by the strong agreement, structured support for training and assessment tools is needed.

Overall (M = 3.47), the implementation of the MATATAG Curriculum was perceived as a "Somewhat Challenging" process, with Curriculum and Content Structure and Assessment and Evaluation as the areas of greatest difficulty. Teachers across the board consistently conveyed an urgent need for assistance with curriculum orientation, improved assessment design, continuous professional development, and greater availability of instructional resources.

Challenges experienced in the MATATAG curriculum implementation of Mathematics teachers for Grades 1, 4, and 7 show slightly different results. According to a one-way ANOVA test, only Resource Availability showed statistically significant differences among the three groups of teachers ($F(2,736)=13.30$; $p<.05$), with the average scores on Resource Availability as follows: Grade 1 M = 3.56; Grade 4 M = 3.56; and Grade 7 M = 3.20. The other categories, such as content and structure ($p=.204$), teacher readiness and professional development ($p=.718$), and assessment and evaluation, did not show significant differences. Across all grades, Mathematics teachers are uniformly challenged by the new curriculum's content, readiness, and assessment. Still, Grades 1 and 4 had a significantly lower level of Resource Availability (M=3.56) than Grade 7 (M=3.20), indicating that the challenges of acquiring resources to implement the MATATAG curriculum are greatest for teachers in Grades 1 and 4.

Table 2. Mean, Standard Deviations, and One-Way ANOVA in Challenges Encountered by Mathematics Teachers in the Implementation of the MATATAG Curriculum

Measure	Grade 1		Grade 4		Grade 7		F (2, 736)	*p*
	M	SD	M	SD	M	SD		
Content and Structure	3.59	0.56	3.51	0.71	3.61	0.65	1.595	.204
Teacher Readiness and Professional Development	3.34	0.60	3.30	0.74	3.34	0.61	0.331	.718
Resource Availability	3.56	0.65	3.56	0.65	3.20	0.70	13.300*	.000
Assessment and Evaluation	3.59	0.56	3.59	0.56	3.55	0.57	2.881	0.57

*p< .05

Students in Grades 1, 4, and 7 achieved average grades "approaching proficiency" under the MATATAG Curriculum (overall mean score of 83.95). Although all levels performed similarly, many students have not yet reached proficiency. Providing students with extensive, visually specified mathematics tasks helps develop positive attitudes and self-efficacy. It was stressed that parental influence on student motivation is important; teachers' roles include fostering a positive atmosphere that supports student success.

Table 3. Overall Trends in Students' Grades at the End of the Initial Implementation of the MATATAG Curriculum

Grade Level	Grade Average	SD	Interpretation
Grade 1	83.87	0.14	Approaching Proficiency
Grade 4	84.07	0.13	Approaching Proficiency
Grade 7	83.90	0.21	Approaching Proficiency
Overall	83.95	0.09	Approaching Proficiency

Note: 90% and above - Advanced; 85 – 89% - Proficient; 80 – 84% - Approaching Proficiency; 75 – 79% - Developing; and 74% and below – Beginning

No statistical relationship was found between the challenges experienced by Mathematics teachers and students' overall Mathematics grades (r = -0.056, p = .132). Even though there is a negative correlation, the correlation is very weak (not statistically significant). This suggests that, while teacher-reported challenges did not have a direct or measurable effect on students' Mathematics performance when the MATATAG Curriculum was first implemented, they may influence learning. There are many factors beyond teacher-related issues that affect students' performance, such as prior knowledge, motivation, parental support, school leadership, and assessment practices. Moreover, using students' overall grades may limit the ability to identify subtle instructional effects during the early phase of implementation, and teachers' coping strategies may mitigate potential negative effects.

Table 4. Correlation between Challenges Encountered by the Teachers in the Initial Implementation of the MATATAG Curriculum and the Overall Grades of the Students

Variables	r	Description	*p* - value	Decision	Interpretation
Challenges Encountered by the Teachers	-.056	No Correlation	.132	Accept Ho	There is no significant relationship.
Grades of the Students					

Conclusion

The study found that during the initial implementation of the MATATAG Mathematics Curriculum, teachers faced challenges with curriculum content, structure, teacher preparation, resources, and assessment and evaluation methods. However, there was no statistically significant relationship between the challenges teachers reported and student academic results. This means that, despite these challenges, teachers adapted their instructional practices to continue supporting their students' learning. With improved systemic support such as structured professional development, adequate instructional materials, and clear assessment guidelines, the MATATAG Curriculum is poised to help provide students across the Philippines with a quality, equitable educational experience. However, this study focused only on students in Grades 1, 4, and 7 in public schools in the Schools Division of Bulacan; therefore, the generalizability of the findings is limited. The study also relied on participants' self-reports via surveys, which may introduce response bias and thus may not accurately reflect participants' experiences. The only measure of student performance used to evaluate the effectiveness of the MATATAG Curriculum was the students' overall Mathematics grades. Future studies should consider additional measures other than grades to evaluate student performance, such as standardized Mathematics test scores,

diagnostic & competency-based assessments, higher order performance tasks, longitudinal achievement data, and qualitative data (student interviews, focus groups, classroom observations, motivation, engagement, self-efficacy, and conceptual understanding surveys) to provide a more comprehensive evaluation of the cognitive and non-cognitive outcomes related to learning and the effectiveness of the MATATAG Curriculum..

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