ACADEMIC PERFORMANCE AND NATIONAL ACHIEVEMENT TEST (NAT) PERFORMANCE OF GRADE 6 PUPILS: BASIS FOR TUTORIAL EXTENSION PROGRAM

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ABSTRACT: *This study explored the relationship between academic performance and National Achievement Test (NAT) results among Grade 6 pupils in public elementary schools of the Siaton District, Negros Oriental Division for the School Year 2023–2024. It aimed to determine whether academic performance can predict NAT performance and to identify discrepancies between the two measures. Specifically, the study investigated the difference between pupils' academic grades in Mathematics, English, Science, and AralingPanlipunan and their corresponding NAT Mean Percentage Scores (MPS), with the goal of informing a proposed Tutorial Extension Program. Using a descriptive-comparative and correlational design, the study analyzed academic grades and NAT scores from 44 elementary schools. Pearson's correlation was used to examine the relationship between academic performance and NAT results, while differences in scores were analyzed to identify performance gaps. Results revealed that academic performance across all subjects generally fell within the "Satisfactory" range, while NAT scores tended to fall within the "Nearly Proficient" and "Low Proficient" levels. The study also found only negligible to low associations between academic grades and NAT performance, highlighting a misalignment between classroom-based assessments and standardized testing outcomes. The findings emphasize the need to identify schools with high academic grades but low NAT results as key targets for intervention. A Tutorial Extension Program is proposed to bridge these gaps by reinforcing skills required for national assessments. The study concludes that academic grades alone are insufficient predictors of NAT performance and that targeted instructional support is necessary to improve students' readiness for standardized testing.*

Keywords: Academic performance, National Achievement Test (NAT), Mathematics, Science, English, Mean Percentage Scores (MPS), curriculum alignment, standardized assessment

1. INTRODUCTION

The Department of Education (DepEd) consistently aims to monitor and evaluate the academic progress of learners across the country through the administration of the National Achievement Test (NAT). This standardized assessment tool gauges the competency levels of Grade 6 pupils in core learning areas such as Mathematics, English, Science, and AralingPanlipunan, using the Mean Percentage Score (MPS) as a measure of achievement.

At the national level, the 2023–2024 NAT results reveal that Grade 6 pupils achieved an overall MPS of 57.94, with subject-specific scores of 53.34 in Mathematics, 61.03 in English, 51.36 in Science, and 59.54 in AralingPanlipunan. These scores place most learners within the "Nearly Proficient" category, indicating that while students are meeting the minimum competency standards, there remains substantial room for improvement to reach higher proficiency levels.

Zooming into Region VII (Central Visayas), the regional average MPS stands at 56.63, slightly below the national score. Within the region, Negros Oriental, one of the divisions under Region VII, posted a relatively stronger performance with an overall MPS of 60.85 — surpassing both the regional and national averages. Notably, learners in Negros Oriental scored 57.88 in Mathematics, 62.68 in English, 54.84 in Science, and 62.69 in AralingPanlipunan [1].

At the grassroots level, the Siaton District, which is part of Negros Oriental, presents a diverse range of academic outcomes across its public elementary schools. A close analysis of the district-level NAT results shows significant variation in MPS across different schools and subjects. While some schools achieved scores within the Proficient to Highly Proficient range, others remain in the Low Proficient category, underscoring the need for a more localized and targeted educational response.

This study seeks to examine the academic performance and NAT outcomes of Grade 6 pupils in the Siaton District to identify trends, relationships, and predictors of achievement. By understanding how local academic performance correlates with standardized test results, the study aims to inform actionable strategies to enhance educational quality and learner outcomes in the district. Specifically, it purports to shed light to the following questions:

1. What is academic performance of grade 6 public elementary schools off season District of Negros Oriental division in terms of?
   1.1Mathematics;
   1.2 English;
   1.3 Science; and
   1.4 AralingPanlipunan?
2. What is the National Achievement test mean percentage score (MPS)of grade 6 public elementary schools of Siaton District of Negros Oriental division for the academic tear 2023-2024 in terms of:
   2.1 Mathematics;
   2.2English;
   2.3 Science; and
   2.4 AralingPanlipunan?
3. What is the distribution of Grade 6 schools in the Siaton District across the five proficiency levels in each core subject based on the 2023–2024 NAT results?
4. Is there a relationship between the academic performance and the National Achievement test mean percentage score (MPS)?
5. What is the difference between the Academic Performance and NAT results of Grade 6 schools in the Siaton District?

6. What recommendations can be proposed to improve the academic performance and National Achievement Test (NAT) mean percentage scores of grade 6 public elementary schools of Siaton District of Negros Oriental division based on the findings of the study?

2. REVIEW OF RELATED LITERATURE

Numerous studies have been conducted examining the relationship between academic performance and outcomes in standardized tests such as the National Achievement Test (NAT). These studies offer empirical support for viewing classroom academic performance as a strong predictor of NAT performance, providing critical foundations for programs like tutorial extension initiatives.

Casildo [2] developed a predictive model that links academic performance to NAT outcomes using educational data mining. The study found that specific academic subjects, particularly core areas like Mathematics and Science, serve as significant predictors of NAT scores. This insight affirms the practicality of using academic records to anticipate students' standardized test outcomes, reinforcing the importance of school-based performance as a basis for intervention.

Supporting this, Ojastro *et a*l. [3] revealed a weak to moderate correlation between school academic grades and NAT performance in Science and Mathematics among senior high school students in Negros Oriental. Their findings suggested that even students rated as "Outstanding" in their academic records performed within the "Low Proficient" level in NAT, indicating the influence of other external or instructional factors.

Similarly, Kalaing [4] examined learners' NAT scores and their English academic grades, uncovering a statistically significant relationship. Both teacher and learner perspectives acknowledged various contributing variables such as learner motivation, school support, and instructional quality. These findings point to the multidimensional nature of academic performance as a predictor of NAT success.

Montero and Geducos [5] investigated localized and contextualized learning activities and found these significantly improved conceptual understanding and academic outcomes in Biology. The implication is that teaching strategies aligned with learners' contexts can impact both academic grades and standardized test performance, particularly when conceptual learning is targeted.

In terms of instructional approaches, De Los Reyes and Orongan [6] found that digital project-based learning enhanced both academic achievement and technological skills in Grade 10 Science students. This suggests that modern pedagogical strategies can close the gap between curriculum performance and standardized assessments, especially in Science.

Berame [7] emphasized the critical role of technology integration in improving NAT performance in Science in Butuan City. Schools with access to ICT resources and teachers with better technological skills showed higher NAT scores, demonstrating the need for modern tools and teacher training to reinforce academic performance.

In international contexts, Inoncillo [8] found that mathematics test anxiety and numerical anxiety are strong negative predictors of math achievement, suggesting that psychological factors can impede student performance despite academic potential. Similarly, Gaviria [9] highlighted that student self-efficacy and parental support influence achievement test outcomes, drawing from a U.S.-based case study.

Obafemi *et al*. [10] reinforced the role of self-efficacy in academic achievement in Mathematics, echoing Bandura's social cognitive theory that motivation and belief in one's ability are central to educational success.

Teacher-related factors have also been widely studied. Saka [11] reported that teacher collaboration significantly improves student performance in Mathematics, while Küçükalioğlu and Tuluk[12] found that teacher self-efficacy in classroom management had a measurable effect on student outcomes. Both studies imply that internal school mechanisms can influence academic predictors of NAT success.

Boz, Ozcan, and Sarioglan [13] developed and validated achievement tests that effectively measure scientific understanding, providing insights into test design and the alignment of instructional goals with assessment standards. Likewise, Şahin *et al.* [14] underscored the importance of structured test development for reliability and validity in assessing student achievement.

In a large-scale comparative study, Wu *et al*. [15] used cognitive diagnostic models to assess PISA math performance across countries. Their findings highlighted the importance of diagnosing cognitive attributes in learning, suggesting that standardized test outcomes are also reflective of broader cognitive learning trajectories.

Locally, Branzuela *et al.*[16] analyzed NAT scores in Misamis Oriental and found stark differences in performance based on school size and location. Schools in urban areas consistently performed better than those in rural zones, which echoes the influence of contextual variables on academic and test performance.

Añar, Barroso, and Manlagaylay [17] examined factors influencing NAT results among elementary and secondary learners. Their research identified low proficiency in critical thinking and problem-solving across subjects, with school size and administrative perspectives also playing a role.

Abatayo, Pantallano, and Gumacial [18] explored linguistic constructs in NAT results, revealing that English proficiency affects performance in Science and Math due to its role as the medium of instruction. This reinforces the need for strong academic grounding in language as a basis for success in content subjects.

Cabiling [19] explored determinants of NAT performance in Augustinian schools, showing that student-related factors, particularly emotional readiness and IQ, had the most significant impact on NAT outcomes. Teacher and administrative variables were found to be less influential, though still relevant.

In the Mindanao context, Callaman and Itaas [20] conducted a meta-analysis revealing that mathematical skills, attitude, and self-efficacy are consistent predictors of achievement. They further suggested that curriculum enhancements and teaching strategies should be aligned to improve performance outcomes.

Attakumah [21] emphasized the role of achievement tests as global indicators of school success. His theoretical

perspective argues for standardized assessments to measure cognitive performance and support international benchmarking in education quality.

Achievement models such as the PEDE (Posing-Exploring-Doing-Evaluating) framework by Casing [22] have also demonstrated effectiveness in enhancing student performance in Mathematics. Such approaches support tutorial-based interventions that scaffold learning through structured stages.

Lastly, the gamified flipped classroom model examined by Balci and Esgi[23] revealed improvements in algorithm learning and student engagement, highlighting how instructional innovation can bridge gaps between academic achievement and standardized assessments.

3. SIGNIFICANCE OF THE STUDY

For the Learners

The study aims to provide insights into how academic performance in specific subjects such as English, Mathematics, Science, and AralingPanlipunan influences performance in the NAT. Identifying these predictive relationships helps in designing targeted tutorial programs that reinforce students' weak areas, thus enhancing their mastery of fundamental competencies. This aligns with prior research emphasizing the role of academic support and content-specific interventions in improving student achievement [5; 24].

For the Teachers

The findings of this study may serve as a reflective tool for teachers to analyze how their grading and instructional methods correlate with NAT outcomes. It encourages the adoption of aligned formative assessments, differentiated instruction, and remediation strategies based on actual learner needs. This also supports teacher-led initiatives to close the performance gap between regular classroom outputs and standardized test scores [11]; [4].

For School Administrators and Program Planners

School heads and curriculum coordinators may utilize the results to inform decisions on the implementation of school-based tutorial extension programs. The study's evidence-based recommendations can guide resource allocation, scheduling of enrichment sessions, and teacher deployment for supplementary instruction. Furthermore, this study may support the strategic design of school improvement plans and performance-based monitoring systems [7; 2].

For Policymakers and the Department of Education

At the macro level, the research contributes empirical evidence that can influence policy directions concerning national assessments and academic interventions. The findings may support curriculum reforms, promote the institutionalization of remedial programs, and guide the integration of assessment data into educational planning. Such evidence-based policymaking aligns with the Department of Education's thrust to improve basic education outcomes, particularly through the use of national assessment results for accountability and intervention planning [19; 3].

For Future Researchers

This study serves as a foundational reference for scholars investigating the interplay between classroom performance and standardized testing. It offers a framework for replicable methodologies and comparative studies in other regions or grade levels. Furthermore, it adds to the scholarly discourse on the validity of academic performance as an indicator of standardized test success [8; 21], encouraging further exploration into academic interventions, cognitive development, and instructional effectiveness.

METHODOLOGY

Research Design

This study employed a descriptive-correlational and comparative research design. The correlational component aimed to determine the relationship between the academic performance of Grade 6 pupils and their corresponding scores in the National Achievement Test (NAT). The comparative aspect focused on identifying the differences between the academic grades and the NAT results across four core subjects: English, Mathematics, Science, and AralingPanlipunan. This design is appropriate for exploring the predictive value of academic performance on standardized test results and determining the extent of variance between internal and national assessments.

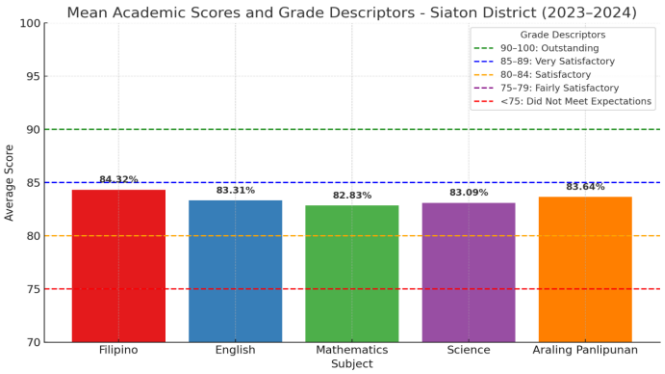

Figure 1 Academic Performance of Grade 6 Public Elementary Schools of Siaton District of Negros Oriental Division

Participants and Locale of the Study

The respondents of the study were Grade 6 pupils from 44 public elementary schools in the Siaton District, under the Division of Negros Oriental, for the School Year 2023–2024. The entire population of the district was considered for this study, ensuring a comprehensive representation of all schools offering Grade 6. No sampling technique was necessary due to the use of total population.

Research Instruments

Two sets of secondary data were utilized in this study:

Academic Performance – The general weighted averages (GWA) of Grade 6 pupils per subject (English, Mathematics, Science, and AralingPanlipunan) based on the final grades for S.Y. 2023–2024.

NAT Results – The Mean Percentage Scores (MPS) of the same pupils from the National Achievement Test administered by the Department of Education in the same academic year.

Data Gathering Procedures

The academic performance data were retrieved from the official Form 138 and consolidated grade records provided by the class advisers, subject teachers, and school heads. The NAT MPS data were sourced from the Bureau of Education Assessment (BEA) through the Schools Division Office of Negros Oriental.

Each school's academic and NAT data were encoded, organized per subject, and matched accordingly. For confidentiality, school names were anonymized during data processing and presentation.

Data Analysis

Descriptive Statistics (mean and standard deviation) were used to summarize the academic performance and NAT scores of the learners.

Pearson Product-Moment Correlation was used to determine the degree of relationship between academic performance and NAT results in each subject. As the study involved the entire population of Grade 6 pupils in Siaton District, p-values were not computed, and the rho-values were interpreted directly based on standard correlation thresholds.

Difference Analysis – The mean differences between academic performance and NAT scores were computed per subject to assess potential gaps. These differences were visualized through bar graphs, comparing internal school-based assessment results and national assessment outcomes.

The interpretation of results was strengthened by relevant empirical studies and educational literature to contextualize the findings and support implications for program development.

Ethical Considerations

Permission to access and utilize school records and NAT results was granted by the Schools Division Superintendent, school heads, and class advisers. All data were anonymized to protect the identities of schools and pupils. The study adhered to the ethical standards set forth by the Department of Education and institutional review protocols concerning the use of student data for academic research.

RESULTS AND DISCUSSION

Figure 1 presents the mean academic scores of Grade 6 pupils from public elementary schools in Siaton District, Negros Oriental Division for the School Year 2023–2024 across four core subjects: English, Mathematics, Science, and AralingPanlipunan. Each subject's mean score is plotted against the official Department of Education grading descriptors: Outstanding (90–100), Very Satisfactory (85–89), Satisfactory (80–84), Fairly Satisfactory (75–79), and Did Not Meet Expectations (below 75). The results show that all four subjects fall within the "Satisfactory" range (80–84), with AralingPanlipunan registering the highest average at 83.84%, followed by English at 83.31%, Science at 83.09%, and Mathematics at 82.83%.

While these scores reflect generally favorable academic performance, none of the subjects reach the "Very Satisfactory" threshold, pointing to moderate mastery but also revealing a plateau in performance. The relatively lower mean score in Mathematics echoes long-standing challenges in this subject. Callaman and Itaas [20] highlighted that poor foundational skills and negative learner attitudes significantly impede mathematics achievement. Inoncillo [8] added that both mathematics test anxiety and numerical anxiety are significant negative predictors of achievement, with numerical anxiety having a stronger adverse effect. These psychological barriers must be addressed to elevate learner outcomes in Mathematics.

Similarly, Science, while scoring slightly higher than Mathematics, still falls short of the desired benchmark. As Berame [7] pointed out, inconsistencies in technology-assisted instruction and the limited access to digital learning tools in rural schools like those in Siaton may hinder performance. Ojastro, Banot, Ragay, and Batucan [3] further observed that even students with commendable academic grades often perform poorly on standardized assessments like the NAT, especially in Science and Mathematics, indicating a misalignment between classroom evaluations and standardized benchmarks. Casildo [2] also modeled the relationship between academic grades and NAT scores, showing that while classroom performance may have predictive value, it does not fully determine NAT results due to the gap in content rigor and focus.

This clustering of scores near the upper limit of the "Satisfactory" category, yet consistently below "Very Satisfactory," supports the conclusion of Kalaing [4] that classroom performance and standardized test results may diverge when instructional assessments are not sufficiently rigorous or aligned with intended learning outcomes. Cuajao [25], in a comparative analysis of NAT results and academic performance, noted similar discrepancies, further emphasizing that NAT assessments prioritize higher-order thinking and problem-solving, which are not always adequately measured in school-based assessments. Abatayo, Pantallano, and Gumacial [18] asserted that the NAT measures broader competencies like critical thinking, reasoning, and information processing—skills that may not be fully captured in classroom exams.

The findings presented in the graph reinforce the need for strategic interventions to address these performance gaps, particularly in Science and Mathematics. Montero and Geducos [5] demonstrated that localized and contextualized instructional materials significantly enhance students' conceptual understanding in science. Likewise, Casing [22] proved the effectiveness of the PEDE model (Posing, Exploring, Doing, Evaluating) in improving mathematical achievement. The integration of innovative tools, such as augmented reality, has also been shown to improve academic performance and retention, as documented by Yildirim and Seckin-Kapucu [24].

These insights suggest that academic performance alone, while a useful indicator, may not be sufficient to forecast high NAT achievement. Thus, the development of a targeted Tutorial Extension Program in Siaton District becomes essential. Such a program should leverage academic scores as a baseline while incorporating predictive insights, as recommended by Casildo [2] and the decision support framework. The program must employ differentiated instruction, learner-centered strategies, and ongoing formative assessment to bridge learning gaps and support Grade 6 pupils' readiness for the National Achievement Test.

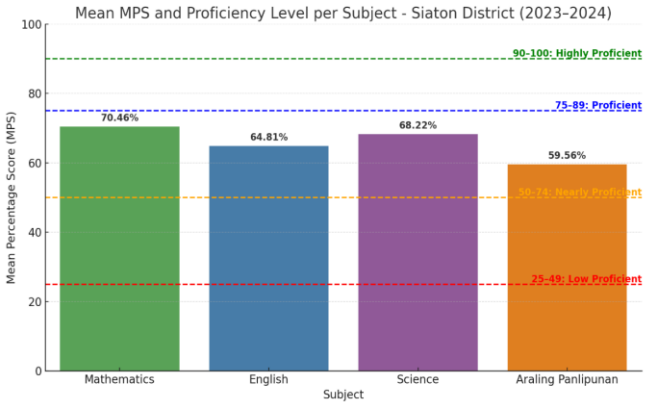

Figure 2National Achievement Test Mean Percentage Score (MPS) of Grade 6 Public Elementary Schools of Siaton District of Negros Oriental division for the Academic Year 2023-2024

Legend:

Levels of Proficiency	MPS	Descriptions
Highly Proficient	90-100	At this level, the students are highly capable of solving problems, managing and communicating accurate information, and analyzing and evaluating data to create/formulate ideas.
Proficient	75-89	At this level, students are skilled in solving problems, managing and communicating information, and analyzing and evaluating data to create/formulate ideas.
Nearly Proficient	50 – 74	At this level, students met the minimum level of skills in solving problems, managing and communicating information, and analyzing and evaluating data to comprehend ideas.
Low Proficient	25-49	At this level, students can identify strategies in solving problems, differentiate and organize information.
Not Proficient	0-24	At this level, students can solve simple problems, classify and identify the source of information.

Figure 2 illustrates the Mean Percentage Scores (MPS) of Grade 6 pupils in the National Achievement Test (NAT) across four core subject areas—Mathematics, English, Science, and AralingPanlipunan—in the Siaton District for the 2023–2024 academic year. The data reveal that all subject areas fall below the "Proficient" level (75–89%), with scores ranging from 59.56% in AralingPanlipunan to 70.46% in Mathematics. According to the NAT proficiency classification, all subjects are categorized under the "Nearly Proficient" range (50–74%), suggesting a partial mastery of the required competencies and indicating significant room for improvement.

Among the subjects, Mathematics posted the highest mean score at 70.46%, followed by Science at 68.22%, English at 64.81%, and AralingPanlipunan with the lowest at 59.56%. While Mathematics and Science appear relatively stronger, these scores remain below the benchmark for proficiency, highlighting persistent gaps in content mastery and critical thinking. This pattern is consistent with previous national and local studies. For instance, Ojastro *et al*. [3] found that in Negros Oriental, NAT scores in Science and Mathematics were significantly lower than students' academic performance ratings, pointing to discrepancies between classroom grading and standardized test performance. Similarly, the study of Cuajao [25] noted that even high-performing students in classroom assessments often scored poorly on NAT, indicating misalignment between instruction and standardized assessment frameworks.

The low performance in English and AralingPanlipunan, particularly the latter, reflects deeper issues of academic engagement and possibly content delivery. In the analysis of NAT results in Misamis Oriental, Branzuela *et al*. [16] confirmed that students consistently scored lowest in Mathematics and Science, but also reported deficiencies in subjects reliant on comprehension and contextual knowledge, such as Araling Panlipunan. The present findings echo those of Kalaing [4], who observed that students' NAT results are strongly influenced by external factors including learning environment, instructional strategies, and assessment quality. Furthermore, Tani [26] emphasized the importance of test quality, pointing out that many objective-type items used in national assessments lack discriminative power, thus failing to reflect students' nuanced understanding or problem-solving abilities.

The implication of the data presented in this figure aligns with findings from both local and international literature. For example, Casildo [2] highlighted that while academic performance is moderately predictive of NAT scores, variations occur due to inconsistent assessment standards. The analysis by Añar*et al*. [17] also found that both elementary and secondary learners tend to fall below proficiency in critical thinking and information literacy, core competencies tested by NAT. Moreover, studies like that of Wu *et al*. [15] in the context of PISA show that international assessments consistently identify gaps in Filipino students' performance related to cognitive skill mastery, mirroring the trends observed in the NAT data for Siaton District.

Table 1: Distribution of Grade 6 schools in the Siaton District Across the Five Proficiency Levels in each Core Subject Based on the 2023–2024 NAT Results

Level	Mathematics	English	Science	Araling Panlipunan
High Proficient (90-100)	1	3	2	0
Proficient (75-89)	16	16	17	10
Nearly Proficient (50-74)	23	14	16	22
Low Proficient (25-49)	4	10	9	11
Not Proficient (0-24)	0	1	0	1

Legend:

Levels of Proficiency	MPS	Descriptions
Highly Proficient	90-100	At this level, the students are highly capable of solving problems, managing and communicating accurate information, and analyzing and evaluating data to create/formulate ideas.
Proficient	75-89	At this level, students are skilled in solving problems, managing and communicating information, and analyzing and evaluating data to create/formulate ideas.
Nearly Proficient	50 – 74	At this level, students met the minimum level of skills in solving problems, managing and communicating information, and analyzing and evaluating data to comprehend ideas.
Low Proficient	25-49	At this level, students can identify strategies in solving problems, differentiate and organize information.
Not Proficient	0-24	At this level, students can solve simple problems, classify and identify the source of information.

Given the uniformly "Nearly Proficient" performance across subjects, the results support the urgent implementation of targeted interventions such as tutorial extension programs. These initiatives should focus on skills-building in key domains of knowledge, integrating evidence-based strategies such as localized and contextualized learning [5], digital project-based learning [6], and the application of models like PEDE [22]. Without such interventions, learners risk stagnating in their development, thereby widening the gap between intended curriculum outcomes and actual academic proficiency.

Based on the distribution of Grade 6 schools in Siaton District across the five proficiency levels in the core subjects—Mathematics, English, Science, and AralingPanlipunan—for the School Year 2023–2024, the results reflect varying degrees of mastery aligned with the proficiency descriptors established in the national legend.

In Mathematics, only one school reached the Highly Proficient level (MPS 90–100), indicating that very few learners demonstrate advanced capabilities in solving problems, analyzing data, and formulating ideas. A notable number of schools (16) are classified as Proficient (MPS 75–89), where students are considered capable in applying learned skills with moderate complexity. However, the largest portion (23 schools) falls under Nearly Proficient (MPS 50–74), meaning that most learners only meet the minimum threshold of competency. Additionally, four schools are in the Low Proficient band (MPS 25–49), indicating difficulties even in organizing and applying problem-solving strategies. These results reflect persistent challenges in Mathematics instruction, as emphasized in the findings of Callaman and Itaas [20], who reported that students' poor foundational math skills and attitudes hinder their achievement. Inoncillo [8] further identified test anxiety and numerical anxiety as critical factors contributing to underperformance.

In English, the performance is more favorable, with 3 schools attaining Highly Proficient status and 16 categorized as Proficient. This indicates that some schools are producing learners with a strong ability to manage and communicate information effectively. However, 14 schools remain Nearly Proficient, and 10 fall into the Low Proficient range. One school is marked Not Proficient (MPS 0–24), signifying critical instructional gaps where learners are limited to basic recognition and classification of information. This disparity mirrors the concern raised by Kalaing [4] and Ojastro *et al*. [3], who noted inconsistencies between classroom grades and NAT outcomes, possibly due to a lack of alignment between assessment practices and the competencies measured by the NAT.

Science results are similar, with 2 schools at Highly Proficient, 17 at Proficient, and 16 at Nearly Proficient. However, 9 schools are still within the Low Proficient range. This pattern suggests that while a few schools successfully foster deep scientific understanding, the majority of learners are only marginally meeting expectations. Berame [7] associated low Science achievement with insufficient technological integration and resource limitations, especially in rural schools like those in Siaton. Montero and Geducos[5] also stressed the importance of localized and contextualized learning materials in improving students' scientific conceptual understanding.

In AralingPanlipunan, the results are less favorable. No school achieved the Highly Proficient level, and only 10 schools reached Proficient. Most schools (22) fall into the Nearly Proficient range, and 11 are at Low Proficient, with one school marked as Not Proficient. This indicates that many learners struggle to move beyond basic comprehension and organization of social studies content. Abatayo et al. [18] emphasized that assessments in this subject often require higher-order thinking—critical analysis, reasoning, and contextual interpretation—which are not fully developed through rote instruction. The deficiencies here underscore the need for improved instructional design and assessment alignment.

Overall, the data reveal that while a modest number of schools reach proficiency or higher across subjects, a substantial proportion remain at the "Nearly Proficient" and "Low Proficient" levels. According to the Department of Education's legend, students at these levels possess only partial mastery of essential skills and may struggle with advanced tasks such as evaluating information or constructing solutions. As shown by Casildo [2], academic performance can be used to predict NAT outcomes; however, this predictive power is limited when classroom assessments are not aligned with national standards. Ojastro *et al.* [3] study support the use of diagnostic systems and predictive models to guide intervention strategies.

These findings highlight the pressing need for a Tutorial Extension Program focused on elevating students from "Nearly Proficient" to "Proficient" or higher. The program must integrate differentiated instruction, regular formative assessments, and evidence-based strategies such as the PEDE model [22] and augmented reality learning [24]. Teacher collaboration, as advocated by Saka [11], and instructional leadership focused on assessment validity [14] must also be prioritized to ensure that teaching aligns with the competencies tested in the NAT.

In conclusion, the table's data underscore the value of proactive, data-driven intervention to ensure that Grade 6 learners in Siaton District are not only meeting the minimum standards but are prepared to excel in future high-stakes assessments.

Table 2: Relationship Between the Academic Performance and the National Achievement Test Mean Percentage Score

NAT vs Academic Performance	Pearson r	Degree of Relationship
Math	0.233	Low
English	0.017	Negligible
Science	0.153	Negligible
AP	0.179	Negligible

The analysis of the correlation between academic performance and National Achievement Test (NAT) scores across core subjects—Mathematics, English, Science, and AralingPanlipunan (AP)—reveals predominantly negligible relationships. Using the Pearson correlation coefficient as a measure of association, the data indicate that Mathematics has the highest correlation (r = 0.233), which still falls under the category of low relationship. This suggests that pupils who perform well in classroom-based mathematics

assessments may not necessarily achieve similarly high results in standardized national assessments. This finding is consistent with the results of Callaman and Itaas [20], who emphasized that performance in Mathematics is heavily influenced by learner attitude, foundational skills, and anxiety—factors not always visible in classroom grades. Inoncillo[8] likewise found that numerical anxiety strongly predicts mathematics underachievement in standardized contexts.

English yielded the weakest correlation (r = 0.017), classified as a negligible relationship, which implies that academic grades in English have minimal association with pupils' NAT outcomes in the same subject. This weak correlation could be attributed to differences in assessment modalities. As Kalaing[4] and Cuajao [25] point out, classroom assessments often emphasize content familiarity, whereas the NAT measures broader cognitive and language application skills, leading to possible misalignment between the two.

Similarly, Science (r = 0.153) and AralingPanlipunan (r = 0.179) both show negligible correlations, underscoring a persistent gap between day-to-day academic performance and high-stakes assessment results. The findings of Ojastro et al. [3] support this interpretation, indicating that despite satisfactory quarterly grades, many students achieve only "Low Proficient" ratings in the NAT, especially in science. These discrepancies suggest that classroom instruction may not be sufficiently aligned with the cognitive demands of the NAT. Abatayo, Pantallano, and Gumacial [18] argue that the NAT evaluates not only content mastery but also critical thinking and the ability to synthesize information across contexts.

Overall, the negligible to low correlation values observed across all subjects highlight the limited predictive value of academic grades for NAT performance. This affirms the need for enhanced instructional alignment and the implementation of supplemental programs such as targeted tutorial interventions, as recommended by Casildo [2] and supported by predictive frameworks like the Decision Support System. Such programs should focus on bridging the cognitive gap between classroom instruction and standardized testing, incorporating localized strategies [5], technology-based instruction [24], and pedagogical models like PEDE [22] that are known to improve higher-order thinking and achievement test readiness.

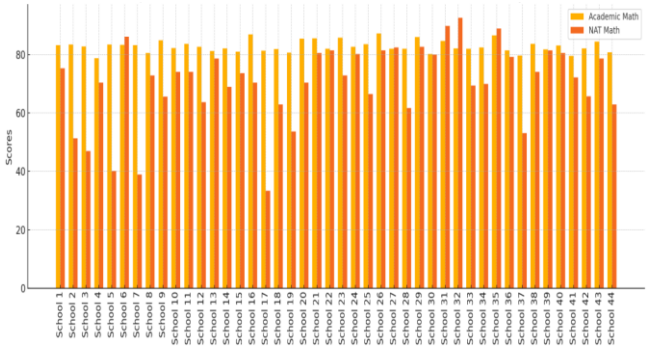

Figure 3 Difference between the Academic Performance and NAT results in Mathematics

The comparison between the academic performance and National Achievement Test (NAT) results in Mathematics for Grade 12 students in public senior high schools of the Negros Oriental Division reveals significant discrepancies. The academic performance, measured by General Weighted Average (GWA), predominantly falls within the "Very Satisfactory" and "Outstanding" categories, with scores ranging from 78.9 to 91.4. In contrast, the NAT Mean Percentage Scores (MPS) in the figure 3 above illustrates a comparative view of academic performance and National Achievement Test (NAT) scores in Mathematics for 44 anonymized public elementary schools in the Siaton District, Negros Oriental Division. The visual comparison reveals a notable trend: academic performance in Mathematics generally scores higher across most schools compared to their NAT results.

This discrepancy supports findings from prior studies that highlight the inconsistencies between internal school assessments and standardized national tests. According to Casildo [2], academic grades can serve as predictors of NAT outcomes, but they are not definitive, primarily due to differences in assessment format, content emphasis, and evaluative rigor. Supporting this, Ojastro *et al*. [3] emphasize that students who perform well in internal assessments do not always translate such performance into high NAT scores, particularly in Mathematics and Science—subjects that demand higher-order thinking and problem-solving under timed, standardized conditions.

Further contributing to this gap, Inoncillo [8] identified that mathematics test anxiety and numerical anxiety significantly hinder student performance in high-stakes testing environments like the NAT. Similarly, Callaman and Itaas [20] confirmed through a Mindanao-focused meta-analysis that poor foundational skills and attitudes towards Mathematics contribute to low standardized test results, even when classroom performance appears satisfactory.

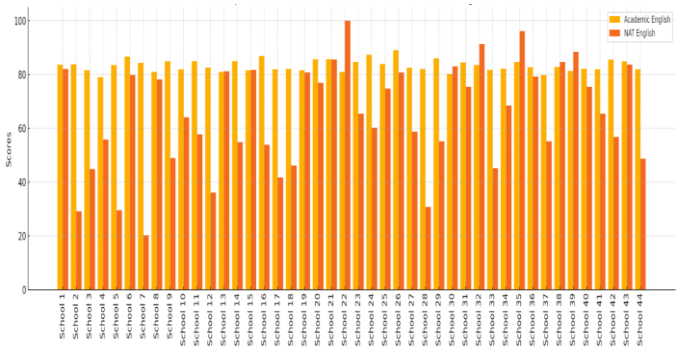

Figure 4 Difference between the Academic Performance and NAT results in English

The figure 4 above illustrates a side-by-side comparison of the Academic Performance and National Achievement Test (NAT) results in English across 44 anonymized public elementary schools in Siaton District. On average, academic grades in English are consistently higher than the corresponding NAT scores. This discrepancy is most pronounced in several schools where academic ratings exceed

80%, yet NAT scores in English fall below 50%.

This pattern highlights a potential issue of misalignment between classroom-based assessments and standardized testing frameworks. Ojastro *et al.* [3] and Cuajao[25] emphasize that such inconsistencies may arise due to differences in assessment design, coverage, and expected cognitive skills. While classroom assessments often focus on knowledge recall and familiarity with routine tasks, the NAT requires higher-order thinking skills such as inference, synthesis, and evaluation [18].

Moreover, Kalaing[4] asserts that teacher-constructed assessments may overestimate proficiency due to limited content coverage and less rigorous item construction. These findings echo the need for standardizing assessment practices and aligning them more closely with national standards, a concern reinforced by the consistently higher academic ratings compared to NAT outcomes across schools.

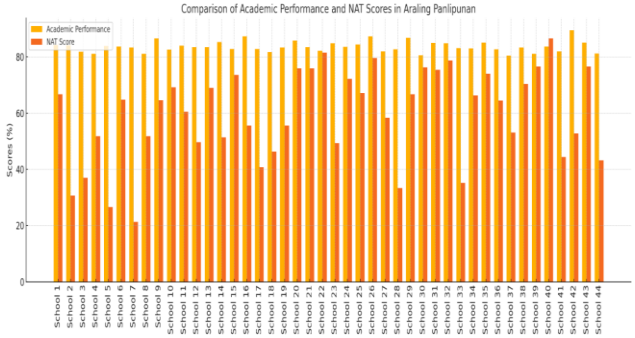

Figure 5 Difference between the Academic Performance and NAT results in Science

The figure 5 above displays the comparative performance of 44 anonymized elementary schools in Siaton District in Science, as measured by their average academic performance and National Achievement Test (NAT) scores for the School Year 2023–2024. While most schools demonstrate relatively strong performance in their academic grades—primarily ranging from 80% to 87%—the NAT Science scores show notable inconsistencies and, in many cases, significant declines, with several schools registering below 50%.

This discrepancy reflects a recurring pattern observed in national and international research. According to Ojastro *et al.* [3], students often perform better in school assessments than in standardized tests like the NAT, particularly in Science, where practical application and higher-order thinking are required. Similarly, Casildo [2] emphasized that academic grades, though reflective of classroom achievements, may not fully predict standardized test performance due to disparities in assessment design and objectives.

The overall lower performance in NAT Science can also be linked to instructional and systemic challenges. Berame[7] cited the limited integration of technology in science instruction, especially in rural schools, as a critical factor in hindering conceptual understanding. Moreover, Yildirim and Seckin-Kapucu[24] found that the use of augmented reality and interactive digital tools significantly improved both academic performance and retention in Science, pointing to a need for modernized pedagogical approaches.

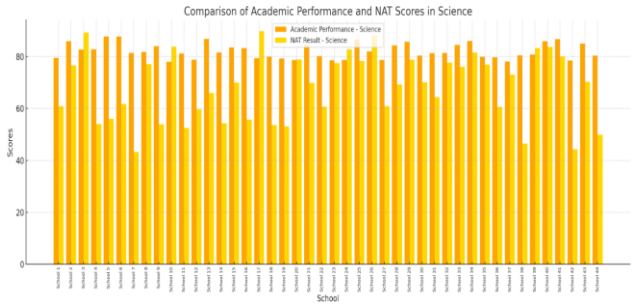

Figure 6 Difference between the Academic Performance and NAT results in AralingPanlipunan

The figure 6 above displays the comparison between the academic performance and National Achievement Test (NAT) results of 44 anonymized schools in AralingPanlipunan (AP) for Grade 6 learners in the Siaton District. As seen in the graph, the majority of schools exhibit a consistent trend where academic grades in AP are significantly higher than the corresponding NAT scores.

This pronounced disparity reflects findings from Branzuela *et al.* [16], who noted similar gaps in NAT performance across various divisions, attributing them to differences in school environments and instructional quality. The trend may also be linked to the lack of alignment between classroom-based assessments and standardized testing, as underscored by Ojastro *et al.* [3], who observed that even students with "Very Satisfactory" grades often scored at the "Nearly Proficient" or even "Low Proficient" level in NAT results.

Furthermore, Casildo [2] emphasized that academic grades, while useful predictors, may not fully represent national test outcomes due to variations in content focus and rigor. The consistently higher academic performance compared to NAT outcomes in AP suggests that students may not be fully mastering the analytical and evaluative competencies required in standardized tests, as explained by Abatayo *et al.* [18].

CONCLUSION

The findings of this study revealed a nuanced understanding of the relationship between academic performance and National Achievement Test (NAT) results among Grade 6 pupils in the Siaton District, Division of Negros Oriental, for the School Year 2023–2024. Across all core subject areas—Mathematics, English, Science, and AralingPanlipunan—academic performance consistently fell within the "Satisfactory" range. However, the NAT results revealed substantially lower Mean Percentage Scores (MPS), with a large number of schools falling within the "Nearly Proficient" and "Low Proficient" categories based on the Bureau of Education Assessment descriptors.

The correlation analysis using Pearson's r showed negligible to low positive relationships between academic performance and NAT scores across subjects. Specifically, English (r = 0.017), Science (r = 0.153), and AralingPanlipunan (r = 0.179) demonstrated negligible correlations, while Mathematics (r = 0.233) exhibited only a very low correlation. These findings suggest that academic performance in these subjects, while positively related to

NAT results, is not a strong predictor of national test performance.

The difference analysis further revealed a notable performance gap between classroom-based academic grades and NAT scores. In Mathematics, the average academic performance significantly exceeded the NAT scores, reflecting challenges in numerical comprehension, cognitive readiness, and standardized test-taking strategies. Similar performance gaps were also identified in English, Science, and AralingPanlipunan, indicating a broader misalignment between internal classroom assessments and the skills assessed in national examinations.

The graphical comparisons reinforced that pupils generally perform better in their academic subjects than in the NAT, highlighting possible disparities in assessment design, instructional delivery, content coverage, and learner preparedness. These discrepancies may be amplified by limitations in educational resources, teacher capacity, and assessment practices, particularly in geographically challenged or under-resourced schools.

In light of these findings, it can be concluded that while academic performance remains a valuable indicator of student learning, it is insufficient on its own to predict NAT outcomes. The evidence supports the need for a well-structured Tutorial Extension Program that specifically targets the enhancement of NAT-related competencies. Such a program should include diagnostic assessments, remedial instruction, test-focused exercises, and learner-centered interventions aimed at equipping pupils with the skills necessary for success in national standardized assessments.

RECOMMENDATIONS

For School Administrators

It is recommended that school heads conduct a focused evaluation to identify schools where a significant discrepancy exists between academic performance and NAT outcomes. Particular attention should be given to schools that consistently produce high academic grades yet perform poorly in the NAT, as this indicates a misalignment between classroom assessments and standardized testing competencies. These schools should be prioritized for the implementation of a targeted Tutorial Extension Program to bridge the gap and reinforce critical skills such as analytical thinking and applied problem-solving.

For Teachers

Teachers should enhance their instructional strategies by integrating NAT-aligned competencies into daily teaching practices. Emphasis should be placed on higher-order thinking skills, contextual problem-solving, and practice with standardized test formats. Teachers are also encouraged to conduct formative assessments that mirror NAT standards to prepare students more effectively. Professional development programs focusing on test construction, differentiated instruction, and remediation techniques should be regularly offered to strengthen teacher capacity in addressing learner needs.

For Curriculum Planners and Supervisors

Curriculum designers and academic supervisors should align instructional materials and assessment tools with the cognitive demands of the NAT. They must ensure that learning activities foster deep understanding rather than rote memorization. The inclusion of NAT-based performance indicators in school improvement plans will help guide interventions at both the school and district levels.

For Policy Makers and the Division Office

The Division Office should institutionalize a system-wide monitoring mechanism to identify patterns of discrepancy between classroom and NAT performance across schools. Schools with consistent disparities should be supported with resources, coaching, and technical assistance to implement effective tutorial interventions. Allocation of funds and personnel should be directed toward schools most in need based on the data analysis.

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