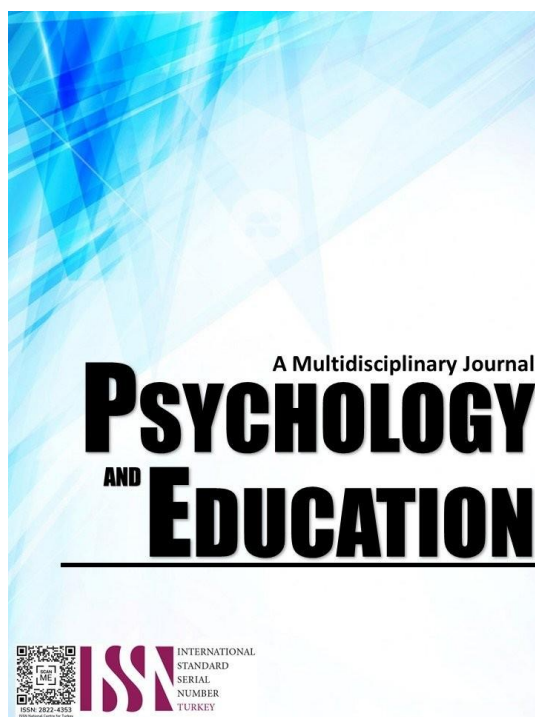


**DIVISION ASSESSMENT TEST IN RELATION TO THE ACADEMIC
PERFORMANCE OF THE HIGH SCHOOL STUDENTS IN
MATHEMATICS IN SAN ISIDRO NATIONAL HIGH
SCHOOL, TAGBILARAN CITY: PROPOSED
IMPROVEMENT MEASURES**



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Division Assessment Test in Relation to the Academic Performance of the High School Students in Mathematics in San Isidro National High School, Tagbilaran City: Proposed Improvement Measures

Lorna B. Lumayog*

For affiliations and correspondence, see the last page.

Abstract

Education is crucial for Filipinos, offering a path to a better future. Despite challenges, the Philippine Department of Education (DepEd) strives to deliver quality education, emphasizing the importance of assessments like the Division Achievement Test (DAT) in measuring student learning. This study analyzes the DAT results and academic performance in Mathematics of high school students at San Isidro National High School, Tagbilaran City. The research aimed to evaluate the correlation between DAT results and academic performance and to propose measures for improvement. Data was collected from 319 students across grades 7 to 10, utilizing documentary analysis of final ratings in Mathematics and DAT results. Findings revealed that Grade 7 students had a mean DAT score of 62.69%, indicating a need for improvement. In contrast, their academic performance was rated as satisfactory, with a mean score of 80.34%. The study also showed that San Isidro National High School ranked third among seven public high schools in Tagbilaran City. Analysis indicated a significant correlation between DAT results and academic performance, with higher academic achievers also performing well on the DAT. There was no significant difference between male and female students' DAT results, but females outperformed males in academic performance. These findings highlight the need for targeted interventions, such as remediation sessions and peer tutoring, to enhance student performance. Recommendations include close monitoring of students with low DAT scores, conducting item analysis after summative tests, and promoting the use of learning modules and resources. The study underscores the importance of continuous assessment and support to improve educational outcomes for Filipino students.

Keywords: *academic performance, Division Achievement Test (DAT), educational improvement, mathematics education, and student assessment*

Introduction

Education plays a pivotal role in shaping an individual's future, particularly in the Philippines, where it is viewed as a crucial pathway to a better life. Recognizing the significance of education, the Philippine government, in conjunction with the Department of Education (DepEd), has invested substantial efforts into enhancing educational quality. Despite facing numerous challenges, DepEd persistently works to provide high-quality education through meticulous planning, training, and assessments.

Teachers are entrusted with delivering lessons that align with DepEd's competencies. Their effectiveness is evaluated through various examinations and achievement tests, which assess students' learning outcomes over the academic year. These assessments, including the Division Achievement Test (DAT) and the National Achievement Test (NAT), are essential for evaluating students' learning capacity and the overall quality of education.

The landscape of student assessment has undergone significant changes in recent years. Today's educational environment demands that students acquire foundational knowledge, new skills, critical thinking abilities, and lifelong learning capabilities. Consequently, there is a pressing need to reassess and adapt assessment practices to meet these evolving demands (Segers, 2003). This transformation necessitates changes in assessment culture and practices within classrooms and schools.

Existing literature underscores the multifaceted nature of assessment and its impact on the teaching-learning process. Assessment is a crucial component of education, serving various purposes such as evaluating student competence, diagnosing strengths and weaknesses, and guiding instructional improvements (Kolawole, 2008). The increasing emphasis on academic performance highlights the importance of aligning assessment strategies with educational standards to ensure students' success in a competitive global landscape.

In line with these educational objectives, DepEd has implemented programs such as the Regional Unified Testing Program (RUTP) and the Division Unified Testing Program (DUTP) to enhance educational quality through rigorous assessment and curriculum evaluation. For example, during the School Year 2016-2017, the Division Assessment Test (DAT) administered at San Isidro National High School aimed to measure students' achievement in Mathematics 7, offering valuable insights into their performance and guiding potential improvements.

Theoretical frameworks, such as Bloom's Taxonomy (1956), provide a structured approach to understanding and improving human thinking and learning. Educators can design assessments that foster critical thinking and problem-solving skills by categorizing cognitive processes into levels such as Knowledge, Comprehension, and Analysis. Additionally, the 21st Century Skills initiative emphasizes the need for students to develop competencies in life skills, core subjects, and innovative thinking to thrive in contemporary society.

Research on factors influencing academic performance, including intelligence, motivation, and socio-economic background, further highlights the complexity of assessing student achievement. Studies have demonstrated that students' perceptions of assessment and engagement in authentic learning tasks significantly impact their performance (Brown & Hirschfeld, 2008; Wenglinsky, 2002). These findings emphasize the need for ongoing evaluation and adaptation of assessment practices to support students' educational development effectively.

This study sought to analyze the Division Achievement Test results in Mathematics 7 at San Isidro National High School, focusing on understanding how these results aligned with the Division standards set by the Division Office. By examining the correlation between test results and academic performance, the research aimed to identify areas for improvement and proposed measures to enhance educational quality.

In summary, the dynamic nature of educational assessment requires continuous reflection and adaptation. This research aimed to contribute to the ongoing efforts to improve educational outcomes and ensure that students are adequately prepared to meet the challenges of the modern world.

Research Questions

The primary objective of the study was to assess the Division Achievement Test Results in relation to the Academic Performance in Mathematics of High School students at San Isidro National High School, Tagbilaran City. The findings of the study will serve as basis for proposed measures. Specifically, the study sought to answer the following questions:

1. What is the Division Achievement test results in Mathematics in the following grade level:
 - 1.1. grade 7;
 - 1.2. grade 8;
 - 1.3. grade 9; and
 - 1.4. grade 10?
2. What is the mathematics academic performance of students in the four grade levels?
3. What is the students' level of attainment in the Division Achievement Test result and its relevance to the learning competencies?
4. Is there a significant degree of correlation between DAT Results and the Academic Performance?
5. Is there a significant degree of difference between the male and female performance as to:
 - 5.1. DAT results; and
 - 5.2. academic performance?
6. What measures could be proposed based on the findings?

Methodology

Research Design

The researcher used a descriptive design using documentary analysis based on the existing records of students regarding their final ratings in Mathematics 7 and Division Achievement Test results in the learning area tested. It utilized purposive universal sampling because all Grade 7 students taking Mathematics were the subjects.

Respondents

The subject of this study comprised 99 Grade 7 students, 87 Grade 8 students, 70 Grade 9 students, and 63 Grade 10 students at San Isidro National High School for the school year 2016-2017. Each year level was divided into two sections: Nangka and Atis for Grade 7, Avocado and Carnava for Grade 8, Bayabas and Caimito for Grade 9, and Lanzones and Pomelo for Grade 10. For the school year 2016-2017, 319 students took the Division Achievement Test, including 152 male students and 167 female students. The researcher handled the Grade 7 and Grade 10 levels, while another teacher dealt with the other two-year levels.

In Grade 7, 59 male students (59.60%) and 40 female students (40.40%). In Grade 8, there were 40 male students (45.98%) and 47 female students (54.02%). In Grade 9, there were 26 male students (37.14%) and 44 female students (62.86%). In Grade 10, there were 27 male students (42.86%) and 36 female students (57.14%). The total number of students consisted of 152 males (47.6%) and 167 females (52.4%).

Instrument

The instrument used to gather data was the Division Achievement Test for the school year 2016-2017 in Mathematics at San Isidro National High School. The Division Achievement Test is a tool from the Division Office that is conducted for all grade levels of students in the last quarter of the school year. Another tool used was the students' academic performance, which was taken from Form 137 from the school registrar.

The grading system for the Mathematics subject for all grade levels comprised Written Works at 40%, Performance Tasks at 40%, and Quarterly Assessment at 20%.

Procedure

Upon receiving approval from the school to conduct the study, the researcher consulted her adviser to officially start the study and secure permission from the Dean of the College of Graduate Studies. The researcher presented a letter requesting the approval of the school principal of San Isidro National High School to conduct the study on the Division Achievement Test results about the academic performance in Mathematics of all students in the four grade levels of San Isidro National High School for the school year 2016-2017. A separate letter with the principal's approval, addressed to the Superintendent, was made to access the Division Achievement Test results and the academic performance of all the students in the four grade levels. The data were then presented in tables and subjected to statistical computations to determine the relationships between variables and the degree of difference among variables.

Data Analysis

This study used the following tests in interpreting the data:

Percentage Formula. To determine the profile of the respondents in terms of age and sex, the frequency of responses was divided by the number of cases and then multiplied by 100.

Pearson Product Moment Correlation Coefficient. To determine the significant correlation between Division Achievement Test Result in Math 7 and the Academic Performance of the Grade 7 learners, the data were subjected to Pearson- Product Moment correlation.

To obtain Pearson Product Moment Coefficient of correlation ratio was checked against the Table of Significant Values at 0.05 level of significance.

Finally, to determine the difference between the male and female results on the DAT and the Academic Performance, the z test is being used.

Ethical Considerations

This study adhered to ethical standards by obtaining informed consent from all participants, ensuring confidentiality, and maintaining voluntary participation without coercion. No harm happened to participants, and the study received ethics committee approval. The researcher declared no conflicts of interest and reported findings transparently and honestly. Cultural sensitivity was respected throughout the research process.

Results and Discussion

This section presents the analysis and interpretation of the data gathered on the Division Assessment Test Result, Academic Performance in Mathematics, MPS of Public Schools in Tagbilaran City, Level of Attainment of the Division Assessment Test, and the correlation between the DAT results and academic performance.

Division Assessment Test Result

The Division Assessment Test Result refers to the scores obtained by the students who took the Division Achievement Test administered to all students in the four grade levels during the school year 2016-2017.

Grade 7. Of the 99 students, 22 (22.20%) were Outstanding, with scores ranging from 90-100. Eight (8.05%) were categorized as Fairly Satisfactory, with percentile ratings of 75-80. Seven (7.07%) were Satisfactory, with ratings of 80-84, and one (1.01%) was Very Satisfactory, with a rating of 85-89. However, 61 students (61.62%) were in the Needs Improvement category with scores below 75. The mean score of the Division Assessment Test was 62.69, indicating Needs Improvement, with 47 students scoring above the mean and 52 students scoring below the mean.

Grade 8. Of the 87 students, all (100%) were categorized as Needs Improvement, with scores below 75. The mean score of the Division Achievement Test for Mathematics 8 was 7.28, or 40.42%, with 37 students (42.5%) scoring above the mean and 50 students scoring below the mean.

Grade 9. Of the 70 students who took the Division Achievement Test, five (7.14%) were categorized as Outstanding, with scores ranging from 90 to 100. Nine students (12.85%) were Very Satisfactory, with percentile ratings of 85-89. Ten students (14.29%) were categorized as Fairly Satisfactory, with ratings of 75-79. However, 46 students (65.71%) were in the Needs Improvement category with scores below 75. The mean score for Grade 9 was 9.39, or 67.04%, with 34 students (48.57%) scoring above the mean and 36 students (51.43%) scoring below the mean.

Grade 10. Of the 63 Grade 10 students who took the test, one student (1.59%) was categorized as Outstanding, with scores ranging from 90-100. One student (1.59%) was Very Satisfactory, with percentile ratings of 85-89. Twelve students (19.04%) were Satisfactory, with ratings of 80-84, and eleven students (17.46%) were categorized as Fairly Satisfactory, with ratings of 75-79. Still, 45 students (71.4%) were in the Needs Improvement category with scores below 75.

The mean score of the Division Achievement Test for Grade 10 was 64.20, indicating Needs Improvement, with 34 students scoring above the mean and 29 students scoring below the mean.

Academic Performance of Students in Mathematics

Academic Performance refers to the grades of the students in mathematics during the school year 2016-2017. To compute the students' Academic Performance for each quarter, 40% is from the Written Works, 40% is from the Performance Task, and 20% is taken from the Quarterly Examination. The final academic performance of the student is the average of the four quarterly grades.

Grade 7. The Academic Performance of the students in Grade 7 shows that 53 (53.54%) students had grades between 75-79, categorized as Fairly Satisfactory. 28 (28.28%) students got 80-84, categorized as Satisfactory. An equal number of 9 (9.09%) students had grades of 90-100 and 85-89, categorized as Outstanding and Very Satisfactory, respectively. It is commendable that no students had grades in the Needs Improvement level. The mean academic performance is 80.34, categorized as Satisfactory. 36 students scored above the mean, and 63 students scored below the mean.

Grade 8. 49 (56.32%) students had grades ranging from 75 to 79, categorized as Fairly Satisfactory. 22 (25.28%) students got 80-84, categorized as Satisfactory. 12 (13.79%) got 85-89, categorized as Very Satisfactory, and 4 (4.59%) students had grades from 90-100, categorized as Outstanding. The mean academic performance for Grade 8 is 80.26, categorized as Satisfactory. 29 students scored above the mean, and 58 students scored below the mean.

Grade 9. 30 (42.85%) students had grades between 75-79, categorized as Fairly Satisfactory. 19 (27.14%) students had grades from 80-84, categorized as Satisfactory. 17 (24.28%) students had grades of 85-89, categorized as Very Satisfactory, and 4 (5.71%) students had grades ranging from 90-100, categorized as Outstanding. The mean academic performance for Grade 9 is 81.37. 34 students scored above the mean, and 36 students scored below the mean.

Grade 10. 27 (42.85%) students had grades ranging from 75-79, categorized as Fairly Satisfactory. 17 (26.98%) students had grades from 80-84, categorized as Satisfactory. 14 (22.2%) students had grades of 85-89, categorized as Very Satisfactory, and 5 (7.94%) students had grades of 90-100, categorized as Outstanding. The mean academic performance for Grade 10 is 81.60. 26 students scored above the mean, and 37 students scored below the mean.

Students' Division Assessment Test Result in Tagbilaran City Schools

Seven high schools in Tagbilaran City took the Division Achievement Test. The results are presented below, showing the name of each school in the Tagbilaran City Division along with their corresponding Mean Percentage Score (MPS) for Mathematics across all grade levels.

Grade 7. Tagbilaran City Science High School ranked first with an MPS of 88.12, indicating that its students have shown mastery of the learning competencies in Mathematics. Mansasa National High School followed with an MPS of 74.10. However, Cogon High School ranked last with an MPS of 41.35. The MPS is influenced by the number of students and the type of students who took the test.

Grade 8. Manga National High School ranked first with an MPS of 79.12, followed by Tagbilaran City Science High School. San Isidro National High School ranked last with an MPS of 40.72.

Grade 9. Tagbilaran City Science High School ranked first with an MPS of 90.76, followed by Manga National High School with an MPS of 87.01. Cogon High School ranked third with an MPS of 70.00, and San Isidro National High School ranked fourth with an MPS of 67.145.

Grade 10. Tagbilaran City Science High School ranked first with an MPS of 79.20, followed by Manga National High School with an MPS of 65.86. San Isidro National High School ranked third with an MPS of 64.14, while Cogon National High School ranked last with an MPS of 41.17.

Students' Division Assessment Test Result in Tagbilaran City Schools

Seven high schools in Tagbilaran City took the Division Achievement Test, and their performances varied significantly.

Grade 7. Tagbilaran City Science High School ranked first with a Mean Percentile Rank (MPR) of 88.12, indicating mastery of the learning competencies in Mathematics. Mansasa National High School followed with an MPR of 74.10. Cogon High School ranked last with an MPR of 41.35. The MPR is influenced by the number and type of students who took the test.

Grade 8. Manga National High School ranked first with an MPR of 79.12, followed by Tagbilaran City Science High School. San Isidro National High School ranked last with an MPR of 40.72.

Grade 9. Tagbilaran City Science High School led with an MPR of 90.76, followed by Manga National High School with an MPR of 87.01. Cogon High School ranked third with an MPR of 70.00, and San Isidro National High School ranked fourth with an MPR of 67.145.

Grade 10. Tagbilaran City Science High School ranked first with an MPR of 79.20, followed by Manga National High School with an MPR of 65.86. San Isidro National High School ranked third with an MPR of 64.14, while Cogon National High School ranked last with an MPR of 41.17.

Students Level of Attainment in the Test items as to the Learning Competencies of Mathematics 7 in the Division Achievement Test Result

The Division Achievement Test (DAT) results for Mathematics 7 were analyzed across four quarters, focusing on the level of attainment in various learning competencies, which provides insights into student performance based on the number of correct answers and corresponding levels of attainment.

First Quarter. Nineteen learning competencies were tested with 20 questions covering four competencies. The first quarter DAT focused on foundational concepts such as arithmetic operations and properties of integers and rational numbers. Notable items included: Item 1 with a frequency of 52 and a level of attainment of 52.53, ranked 16.5; Item 2 with a frequency of 60 and a level of attainment of 60.61, ranked 13; Item 3 with a frequency of 29 and a level of attainment of 29.29, ranked 20; and Item 4 with a frequency of 60 and a level of attainment of 60.61, ranked 13.

Second Quarter. Twenty-two learning competencies were tested with one question covering two competencies. The second quarter DAT included topics on exponentiation and interpretation of numerical values. Notably, Item 5 had a frequency of 62 and a level of attainment of 62.63, ranked 10.

Third Quarter. Eleven learning competencies were tested with 20 questions covering 15 competencies. This quarter emphasized geometric concepts and angle relationships, with multiple items focusing on angles and geometric figures. Notable items included: Item 6 with a frequency of 65 and a level of attainment of 65.66, ranked 9; Item 7 with a frequency of 61 and a level of attainment of 61.62, ranked 11; and items 8-16, which provided a detailed analysis of angles and polygon relationships.

Fourth Quarter. Eleven learning competencies were identified, but no items were prepared for assessment.

The analysis reveals that 75% of the Division Achievement Test questions in Mathematics 7 during the third quarter focused on geometric concepts and angle relationships, highlighting areas where students demonstrated varying levels of attainment. This data provides valuable insights into curriculum effectiveness and student learning outcomes in Mathematics 7.

Students Level of Attainment in the Test items as to the Learning Competencies of Mathematics 8 in the Division Achievement Test Result

The analysis evaluates the level of attainment among students in the Division Achievement Test (DAT) for Mathematics 8, focusing on the alignment of test items with the prescribed learning competencies. Mathematics 8 comprises 57 competencies across four grading periods: 20 competencies in the first quarter, 19 in the second quarter, 8 in the third quarter, and 10 in the fourth quarter. Of the 18 test items in the DAT, 8 (44.44%) tested the first quarter competencies, 4 (22.22%) addressed the second quarter, and 6 (33.33%) aligned with the third quarter. No items were prepared for the fourth quarter.

First Quarter. The highest-ranked item had a frequency of 65 and a level of attainment of 74.71 (Moderately Attained). The lowest-performing item in this period had a frequency of 12 and a level of attainment of 13.79 (Poorly Attained).

Second Quarter. The highest-ranked item again had a frequency of 65 and a level of attainment of 74.71 (Moderately Attained). The item with the lowest performance had a frequency of 13 and a level of attainment of 14.94 (Poorly Attained).

Third Quarter. The top-performing item had a frequency of 47 and a level of attainment of 54.02 (Moderately Attained), while the lowest-performing item in this period had a frequency of 12 and a level of attainment of 13.79 (Poorly Attained).

Overall, the top-performing item across all quarters had a frequency of 65 and a level of attainment of 74.71 (Moderately Attained). The lowest-performing item had a frequency of 12 and a level of attainment of 13.79 (Poorly Attained). This analysis indicates areas of strength and gaps in knowledge, informing instructional strategies and curricular adjustments.

Students' Level of Attainment in the Test items as to the Learning Competencies of Mathematics 9 in the Division Achievement Test Result

The analysis evaluates the level of attainment among students in the Division Achievement Test (DAT) for Mathematics 9, focusing on the alignment of test items with the prescribed learning competencies. Mathematics 9 comprises 48 competencies across four grading periods: 16 competencies in the first quarter, 12 in the second quarter, 14 in the third quarter, and 6 in the fourth quarter. Of the 14 test items in the DAT, 10 (71.42%) tested the third quarter competencies, 1 (7.14%) tested the second quarter competencies, and 3 (21.42%) addressed the first quarter competencies. No items were prepared for the fourth quarter.

First Quarter. The highest-ranked item had a frequency of 57 and a level of attainment of 81.43 (Fully Attained). The lowest-performing item in this period had a frequency of 47 and a level of attainment of 67.14 (Moderately Attained).

Second Quarter. The highest-ranked item had a frequency of 24 and a level of attainment of 34.29 (Poorly Attained).

Third Quarter. The top-performing item had a frequency of 58 and a level of attainment of 82.86 (Fully Attained), while the lowest-performing item had a frequency of 21 and a level of attainment of 30.00 (Poorly Attained).

Overall, the top-performing item across all quarters had a frequency of 58 and a level of attainment of 82.86 (Fully Attained). The lowest-performing item had a frequency of 21 and a level of attainment of 30.00 (Poorly Attained). This analysis indicates areas of strength and gaps in knowledge, informing instructional strategies and curricular adjustments.

Students' Level of Attainment in the Test items as to the Learning Competencies of Mathematics 9 in the Division Achievement Test Result.

The Division Achievement Test (DAT) for Mathematics 10 revealed varied student performance across the 20 test items and 49 learning competencies. Of the questions, six assessed first-quarter competencies, eight covered the second quarter, and six evaluated the third quarter. No questions were prepared for the fourth quarter.

The highest-ranking item, "A geometric sequence is characterized by a constant," achieved a frequency of 60 and a level of attainment of 95.24 (Fully Attained). Conversely, the lowest-ranking item, "The coordinates of the vertices of a square are H (3,8), I (15,8), J (15,-4), and K(3,-4). What is the length of a diagonal of a square?" had a frequency of 16 and a level of attainment of 25.40 (Poorly Attained).

First-quarter competencies saw the highest-performing item correctly answered by 53 students (84.13%, Fully Attained) and the lowest by 24 students (38.10%, Poorly Attained). Second-quarter competencies had the highest frequency at 53 (84.13%, Fully Attained) and the lowest at 19 (30.16%, Poorly Attained). Third-quarter competencies' top item was correctly answered by 44 students (69.84%, Moderately Attained) and the lowest by 27 students (42.86%, Slightly Attained).

These results underscore areas of strength and areas needing improvement, providing valuable insights for future instructional planning and curriculum adjustments.

Correlation between Students' Division Achievement Test and Academic Performance of Grade 7 Students

The study examined the correlation between the Division Achievement Test (DAT) and the academic performance of Grade 7 students. The computed correlation coefficient (r) was 0.64051, indicating a moderate positive correlation. At an alpha level of 0.05, this correlation was significant, confirming a relationship between DAT results and academic performance. Further analysis using a t-test yielded a t-value of 8.214, leading to the rejection of the null hypothesis. The findings revealed that students who scored higher on the DAT also achieved higher academic performance. The mean academic performance was at a satisfactory level, whereas the DAT results indicated a need for improvement.

Similarly, the study on Grade 8 students showed a correlation coefficient (r) of 0.35456, also indicating a moderate positive correlation. At an alpha level of 0.05, this correlation was significant, suggesting a relationship between DAT results and academic performance. The t-test further confirmed the significant correlation with a t-value of 8.214, leading to the rejection of the null hypothesis. Grade 8 students' academic performance was at a satisfactory level, while their DAT results were classified as needing improvement. As with the Grade 7 cohort, those who performed better academically also tended to perform better on the DAT.

Correlation between Students' Division Achievement Test and Academic Performance of Grade 8 Students

The study investigated the correlation between the Division Achievement Test (DAT) and the academic performance of Grade 8 students. The computed correlation coefficient (r) was 0.35456, indicating a moderate positive correlation. At an alpha level of 0.05, this correlation was confirmed as significant, establishing a relationship between DAT results and academic performance. Further analysis using a t-test yielded a t-value of 8.214, leading to the rejection of the null hypothesis. The findings revealed that there is a significant correlation between the DAT results and the academic performance of Grade 8 students in Mathematics 8. The mean academic performance was at a satisfactory level, while the DAT results indicated a need for improvement. Students who performed higher academically also tended to perform higher on the DAT.

Correlation between Students' Division Achievement Test and Academic Performance of Grade 9 Students

The study examined the correlation between the Division Achievement Test (DAT) and the academic performance of Grade 9 students. The computed correlation coefficient (r) was 0.52061, indicating a moderate positive correlation. At an alpha level of 0.05, this correlation was found to be statistically significant, suggesting a relationship between DAT results and academic performance. Further analysis using a t-test resulted in a t-value of 8.214, leading to the rejection of the null hypothesis. These findings indicate a significant correlation between the DAT results and the academic performance of Grade 9 students in Mathematics 8. The mean academic performance was satisfactory, while the DAT results suggested a need for improvement. Students who performed better academically also tended to achieve higher scores on the DAT.

Correlation between Students' Division Achievement Test and Academic Performance of Grade 10 Students

The study investigated the correlation between the Division Achievement Test (DAT) and the academic performance of Grade 10 students. The computed correlation coefficient (r) was 0.35481, indicating a moderate positive correlation. At an alpha level of 0.05, this correlation was statistically significant, suggesting a relationship between DAT results and academic performance. Further analysis using a t-test yielded a t-value of 8.214, leading to the rejection of the null hypothesis. These results indicate a significant correlation between the DAT results and the academic performance of Grade 10 students in Mathematics 8. The mean academic performance was

satisfactory, while the DAT results indicated a need for improvement. Students who performed better academically also tended to achieve higher scores on the DAT.

Difference Between the Male and Female Grade 7 Students' Division Achievement Test Results

The study investigated the difference between the Division Achievement Test (DAT) results of male and female Grade 7 students. The computed t-value of 1.661 was lower than the critical value of 2.021, leading to the acceptance of the null hypothesis. This indicates that there is no significant difference in the performance of male and female students on the DAT. Both genders performed similarly on the test.

Difference Between the Male and Female Grade 8 Students' Division Achievement Test Results

The computed t-value of 1.661 is less than the critical value of 2.021, indicating that there is no significant difference in the performance of male and female students on the DAT. Hence, the study accepts the null hypothesis, suggesting that both male and female students performed similarly on the Division Achievement Test in Grade 8.

Difference Between the Male and Female Grade 9 Students' Division Achievement Test Results

The computed t-value of 1.661 is less than the critical value of 2.021, indicating that there is no significant difference in the performance of male and female students on the Division Achievement Test (DAT) in Grade 9. Hence, the study accepts the null hypothesis, suggesting that both male and female students performed similarly on the DAT in Grade 9.

Difference Between the Male and Female Grade 10 Students' Division Achievement Test Results

The computed t-value of 1.661 is less than the critical value of 2.201, indicating that there is no significant difference in the performance of male and female students on the Division Achievement Test (DAT) in Grade 10. Hence, the study accepts the null hypothesis, suggesting that both male and female students performed similarly on the DAT in Grade 10.

Difference Between the Male and Female Grade 7 Students' Academic Performance

In this investigation, the academic performance of male and female Grade 7 students is compared. The computed t-value of 4.062243 exceeds the critical value of 2.201 at alpha level 0.05, indicating a significant difference. The result shows that female students performed better than male students, with mean ratings of 82.61 (Satisfactory) for females and 78.74 (Fairly Satisfactory) for males.

Difference Between the Male and Female Grade 8 Students' Academic Performance

Here the academic performance of male and female Grade 8 students is compared. The computed t-value of 4.062243 exceeds the critical value of 2.201 at alpha level 0.05, indicating a significant difference. The result shows that female students performed better than male students, with mean ratings of 81.32 (Satisfactory) for females and 79.03 (Fairly Satisfactory) for males.

Difference Between the Male and Female Grade 9 Students' Academic Performance

The computed t-value of 4.062243 exceeds the critical value of 2.201 at alpha level 0.05, indicating a significant difference. The result shows that female students performed better than male students, with mean ratings of 82.28 (Satisfactory) for females and 79.93 (Fairly Satisfactory) for males.

Difference Between the Male and Female Grade 10 Students' Academic Performance

The computed t-value of 4.062243 exceeds the critical value of 2.201 at alpha level 0.05, indicating a significant difference. The result shows that female students performed better than male students, with mean ratings of 82.64 (Satisfactory) for females and 80.22 (Fairly Satisfactory) for males.

Conclusions

Based on the findings, the researcher concludes the following: The Division Achievement Test results for students show a mean rating below the 75% passing percentage. The academic performance of Grade 7 students revealed a mean rating of 80.34, which is categorized as Satisfactory. Students from San Isidro National High School performed better than those from four other high schools in Tagbilaran City, ranking 3rd among the seven public high schools in the city with a Mean Percentage Score (MPS) of 62.69. The level of attainment of test items related to learning competencies indicates that the majority were moderately attained. Most of the twenty test items were derived from the third quarter competencies, with none from the fourth quarter, implying an uneven distribution of items in the Division Achievement Test administered to Grade 7 students.

A significant correlation exists between the Division Achievement Test and academic performance, with the mean academic performance being Satisfactory and the DAT results indicating a Need for Improvement. Students who performed higher academically also tended to perform better in the Division Achievement Test. There is no significant difference between male and female performance on the Division Achievement Test, as both groups performed similarly. However, there is a significant difference in academic performance between males and females, with female students performing better, as indicated by mean ratings of 82.61

(Satisfactory) for females and 78.74 (Fairly Satisfactory) for males.

Based on these findings, the researcher provides the following recommendations: Students with low performance in the Division Achievement Test should receive remedial sessions. Students with fairly satisfactory academic performance should be closely monitored by math teachers through remedial classes aimed at enhancing their learning capacity. Item analysis should be conducted after every summative test to identify the least mastered items and competencies. Peer tutoring can be beneficial in improving students' academic performance. Re-establishing a Math Club on campus, with activities and programs to support students struggling in Mathematics, is recommended. School heads should monitor the achievement of learning competencies by conducting regular classroom visits. Access to the Learning Resources Management and Development System (LRMDS) should be enhanced to support learning in areas where competencies were poorly or slightly attained and to utilize the activities available on the portal. Acquiring learning modules for Grade 7 students is recommended to aid their study at home. Awareness of the impact of Performance Tasks, which constitute 40% of the Academic Performance, should be emphasized. Teachers, not just math instructors, should continuously remind students of the importance of good study habits and education.

Proposed Improvement Measures

Rationale

Mathematics is widely considered one of the most challenging subjects for students. While some excel in this area, many struggle, particularly with problem-solving. To enhance student performance and meet competencies, teachers often employ remedial activities and diverse instructional strategies. Mastery of Mathematics 7 competencies is crucial for building confidence and ensuring academic success as students' progress through junior high school. Student attitudes toward studies significantly impact their academic performance. Poor study habits can lead to low academic achievement, which in turn affects performance on achievement tests conducted by the Department of Education (DepEd). Motivated by these challenges, the researcher proposes improvement measures to the school head of San Isidro National High School. These measures aim to address poor academic performance and raise it to a satisfactory level, with the hope of also improving results on future Division Assessment Tests and other DepEd-administered exams.

Objectives

The proposed improvement program aims to:

- Enhance student academic performance in Mathematics 7 across various learning competencies.
- Improve results in the next Division Achievement Test.
- Assist students struggling with academic subjects to achieve higher ratings in their performance.
- Equip teachers with strategies and techniques tailored to diverse learners and topics.

Mechanics of Implementation

The proposed improvement measures will be presented to the principal of San Isidro National High School and the Division Office of Tagbilaran City. Mathematics teachers at the school will be informed about the program. The principal and teachers will review and plan the implementation of the program.

Schedule of Implementation

The program will be implemented as soon as it is approved by the school principal. The target schedule for implementation is the third quarter of the school year 2017-2018.

Evaluative Measures

Regular monitoring of the program's implementation is essential to achieve the desired academic performance improvements. This monitoring will also help enhance the overall performance of the school in Division Achievement Tests and National Examinations.

Proposed Improvement Measures

Area of Concern	Objectives	Strategies	Persons Involved	Time Frame	Success Indicator
Administration	<ul style="list-style-type: none"> • To enrich the learning modules for Grade 7 students • Conduct trainings/seminars on strategies and techniques in teaching Mathematics • To monitor that all learning competencies are covered. 	<ul style="list-style-type: none"> • Support the teachers in the development of modules • Send teachers to in service seminars and trainings to capacitate them as to strategies and techniques in teaching • Conduct regular classroom observations to check content coverage and the use of appropriate teaching strategies for math. 	<ul style="list-style-type: none"> • Teachers • Administrators 	Whole Year round	<ul style="list-style-type: none"> • Improve students' performance • Modules developed



Teachers	<ul style="list-style-type: none"> Identify the learning deficiencies or gaps of the students when it comes to Mathematics Encourage teachers to utilize variety of strategies to be used during the delivery of the lesson Provide immediate remediation to students who did not meet the expectations or target. Monitor the conduct of the remedial classes. Encourage teachers to grow professionally 	<ul style="list-style-type: none"> Conduct pretest to identify gaps Utilize the use of a variety of strategies and must be reflected in the I-plan. Utilization of the PROJECT EASE program provided by DepEd. Utilization of the LRMS tools for the access of activities. Teachers develop various assessments to monitor students' understanding of the content. Teachers enroll in masteral and doctorate programs in their field of specialization 	<ul style="list-style-type: none"> Teacher Principal Head Teacher Teachers 	<ul style="list-style-type: none"> Beginning of School Year Whole year round 	<ul style="list-style-type: none"> Improve students' performance Capacitated Teachers
Students	<ul style="list-style-type: none"> Cope up with the learning gaps based on the assessment Perform the remediation given to them. 	<ul style="list-style-type: none"> Review on the topics with learning gaps or deficiencies Answer and submit the given remediation Do the PT given and submit to the teacher 	<ul style="list-style-type: none"> Student Teacher 	<ul style="list-style-type: none"> At the beginning of the school year Whole year round 	<ul style="list-style-type: none"> Improved students' performance in written work, performance task and quarterly assessments Improve students rating as to learning competencies
	<ul style="list-style-type: none"> Accomplish the Performance Task given by the teacher 				
Parents/Community	<ul style="list-style-type: none"> Monitor the child performance in school Strengthen teacher -parent relationship. Capacitate child involvement in the community Strengthen linkages between school and community 	<ul style="list-style-type: none"> Everyday checking of their assignments Respond to conference with the teachers Participation in community activities to gain self confidence 	<ul style="list-style-type: none"> Teacher Parent Barangay Officials 	<ul style="list-style-type: none"> Whole Year round 	<ul style="list-style-type: none"> Improve student performance Parents attendance during PTA's Strong partnership of school and community

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Affiliations and Corresponding Information

Lorna B. Lumayog

San Isidro National High School

Department of Education – Philippines