

PREDICTIVE ROLE OF SENIOR HIGH SCHOOL PERFORMANCE AND COLLEGE ADMISSION TEST SCORES ON THE ACADEMIC PERFORMANCE OF FRESHMAN STUDENTS IN STATE UNIVERSITIES



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Predictive Role of Senior High School Performance and College Admission Test Scores on the Academic Performance of Freshman Students in State Universities

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Abstract. Student academic achievement is widely recognized as a key indicator of educational quality and institutional effectiveness. This study examined the predictive role of Senior High School (SHS) performance and College Admission Test (CAT) scores on the academic performance of first-year students at Isabela State University. A descriptive-correlational research design was employed, involving 173 freshmen from the College of Education, selected through proportionate sampling. Secondary data were collected from institutional records, including SHS general weighted averages, college admission test (CAT) scores, and first-semester academic performance. The data were analyzed using descriptive statistics, t-tests, analysis of variance (ANOVA), Pearson's correlation, and multiple regression analysis. The findings revealed that students generally demonstrated strong SHS and CAT performance, alongside satisfactory academic outcomes during their first semester. No significant differences were observed in SHS and CAT performance when grouped by sex; however, significant variations in academic performance were found across the academic programs. Correlation analysis indicated that both SHS performance and CAT scores were significantly associated with students' academic performance, suggesting that prior academic achievement and cognitive readiness contribute to success in college. The regression results further showed that SHS performance was a stronger predictor, while CAT scores provided additional explanatory power, thereby improving the overall predictive accuracy of the model. The combined model explained 28.5% of the variance in academic performance and demonstrated a high predictive capability. These findings underscore the importance of using both SHS performance and CAT scores as complementary indicators in admission decisions and academic planning to better support students' success..

Keywords: Senior High School Performance; College Admission Test (CAT); Academic Performance; Predictive Analysis; Freshman Students

Introduction

The academic success of students is widely regarded as a significant indicator of educational quality, which, in turn, influences the criteria for admission to higher education institutions. These criteria aim to select candidates who are likely to excel in higher education and academic pursuits. Common predictors of such success include high school performance, such as grade point average (GPA), and standardized tests, such as the SAT or institutional examinations. However, the effectiveness of these predictors remains a topic of ongoing discussion. Some studies suggest that high school GPA serves as a strong indicator of college success, as it reflects consistent effort and mastery of subject matter. For example, research involving psychology undergraduates identified GPA as the most reliable predictor of achievement, while admission tests provided additional insights by assessing reasoning and comprehension beyond what GPA measures (Sorgente et al., 2024). In contrast, research in medical education highlights the predictive strength of standardized tests over GPA, particularly in early academic performance, emphasizing measures of

crystallized and fluid intelligence (Jaehn et al., 2025). Therefore, predicting academic success remains a critical and complex challenge in educational research.

In the Philippines, access to higher education has expanded due to policies such as free tuition, resulting in increased competition for admission to public universities. Consequently, state universities employ selective admission processes that consider Senior High School (SHS) grades, admission test scores, interviews, and other criteria. Institutions vary in how they prioritize these factors, often emphasizing academic performance and entrance examinations (Sawey-Ognayon & Afalla, 2022). The absence of a standardized national admission framework creates uncertainty in identifying the most reliable predictors of college success. Despite the K–12 system’s emphasis on SHS preparation, studies indicate that many Filipino graduates still encounter challenges in college readiness due to differences in socioeconomic background and academic track (Asuncion et al., 2021). This underscores the need for further investigation into predictors of academic performance within the Philippine context.

At Isabela State University, admission decisions are based on multiple criteria, including College Admission Test (CAT) scores (50%), interviews (25%), and Senior High School (SHS) grades (25%), along with cut-off scores and program quotas. Despite this structured system, it remains uncertain whether these criteria effectively predict students’ academic performance during their first year in college. Previous studies suggest that SHS grades and admission test scores are useful indicators of academic success; however, their predictive strength may vary depending on institutional context and academic programs (Alamoudi et al., 2021; Hendi et al., 2022; Tamimi et al., 2023).

Despite existing research, findings remain inconsistent. Some studies identify SHS GPA as the strongest predictor of college success, while others highlight the importance of admission test scores. Moreover, limited research has been conducted in Philippine state universities, particularly within Colleges of Education. There is also a lack of studies examining the combined predictive power of SHS performance and CAT scores using both correlation and regression analyses. Therefore, this study aims to address these gaps by examining how SHS performance and CAT scores predict the academic performance of freshman students at Isabela State University.

Research Questions

This study aims to examine how Senior High School (SHS) performance and College Admission Test (CAT) scores relate to and predict the academic performance of freshman students. Specifically, it seeks to determine differences, relationships, and predictive power of these variables in the context of first-year college success.

1. What is the profile of the respondents in terms of sex and course?
2. What is the respondents’ Senior High School (SHS) performance?
3. What is the College Admission Test (CAT) performance of the respondents?
4. What is the academic performance of the respondents during the first semester?
5. Is there a significant difference in the respondents’ SHS performance when grouped according to their profile?
6. Is there a significant difference in the respondents’ CAT performance when grouped according to their profile?
7. Is there a significant difference in the respondents’ academic performance during the first semester when grouped according to their profile?
8. Is there a significant relationship among SHS performance, CAT performance, and academic performance in college?
9. Which between SHS performance and CAT performance significantly predicts academic performance in college?

Scope and Delimitation of the Study

This study examines the predictive role of Senior High School (SHS) performance and College Admission Test (CAT) scores on the academic performance of freshman students at Isabela State University–Echague Campus during the First Semester of the School Year 2025–2026. It focuses on first-year students from the College of Education and considers SHS General Weighted Average, CAT scores, and first-semester academic performance as the main variables, along with profile factors such as sex and academic program. The study is limited to secondary data obtained from official university records and does not include other factors such as motivation, study habits, or socioeconomic background. Therefore, the findings are specific to the selected respondents and may not be generalized to other institutions or programs.

Literature Review

Senior High School Performance as a Predictor of College Academic Success

The performance of senior high school (SHS) students, particularly their high school grade point average (GPA), is often regarded as a reliable indicator of academic success in college. Numerous studies have identified high school GPA as a robust predictor of future college performance, as it reflects essential

qualities such as consistency, effective study habits, and academic discipline. For instance, research involving first-year engineering students has demonstrated significant correlations between high school GPA and university academic achievement, with GPA showing the strongest relationship among various predictors, including standardized test scores and study habits (Aquines Gutiérrez et al., 2022). Similarly, studies in undergraduate psychology programs have affirmed that high school GPA is a strong predictor of academic success outcomes, such as graduation marks, average weighted marks, and timely degree completion (Sorgente et al., 2024). Moreover, high school GPA captures cumulative effort and learning consistency over time, which are critical traits for adjusting to the demands of higher education. While standardized tests contribute to incremental predictive value, the literature consistently highlights prior academic achievement as a foundation for forecasting college success (Wittman, 2022). This body of evidence supports the overarching view that students with higher SHS GPA tend to perform better academically in college, reinforcing the significance of prior achievement in educational progression.

College Admission Test as a Predictor of Academic Performance

Standardized tests, such as the College Admission Test (CAT), SAT, and other entrance examinations, are designed to assess students' cognitive abilities, reasoning skills, and overall readiness for higher education. These assessments play an important role in predicting academic performance in college. Empirical evidence suggests that test scores serve as meaningful indicators of students' success in higher education. For instance, a study involving medical students demonstrated that admission test scores provide significant additional predictive value beyond high school GPA, particularly in assessing crystallized and fluid intelligence, which showed moderate effect sizes (Jaehn et al., 2025). Similarly, research on psychology undergraduates found that admission test scores can predict certain dimensions of academic success that high school GPA alone may not capture, underscoring the complementary role of standardized examinations (Sorgente et al., 2024). Moreover, cognitive skills such as critical thinking—often reflected in standardized testing—have been shown to significantly influence academic performance across higher education disciplines (Anselmo et al., 2025). However, some studies argue that standardized tests may not be as strong a predictor as high school GPA. This suggests that while admission tests are valuable, GPA often remains the most reliable single predictor of college outcomes because it reflects sustained academic effort and consistency over time (Sorgente et al., 2024). Overall, this ongoing debate highlights the complex role of standardized testing in admission processes and emphasizes the importance of considering multiple factors when predicting academic success.

Combined Predictive Power of SHS Performance and Admission Test Scores

Research exploring the combined predictive capabilities of Senior High School (SHS) performance and admission test scores consistently indicates that integrating these measures enhances the accuracy of forecasting college academic success. High school GPA offers valuable longitudinal evidence of students' sustained academic effort, study habits, and discipline, reflecting their consistent performance over time. In contrast, standardized admission tests provide a uniform metric for comparing applicants' cognitive abilities, reasoning skills, and academic readiness across diverse backgrounds and disciplines. For example, a study involving over 5,000 undergraduate psychology candidates revealed that while high school GPA was the strongest single predictor of academic success, admission test scores contributed unique explanatory power beyond GPA. Hierarchical regression analyses suggest that the combination of both predictors improves the selection process by identifying candidates with higher chances of degree completion and academic achievement (Sorgente et al., 2024). Similarly, a multisite study of medical students found that both admission tests and high school GPA were significant predictors of preclinical academic performance, with admission tests sometimes demonstrating stronger predictive validity than GPA. Importantly, the incremental validity of admission tests over GPA was more substantial than the reverse, highlighting the complementary nature of these criteria (Jaehn et al., 2025). These findings collectively support the rationale for employing multiple regression analyses to assess the distinct and joint contributions of SHS grades and admission test scores in predicting college academic outcomes. Utilizing both measures provides a more comprehensive evaluation of student preparedness, balancing the evidence of long-term academic habits with standardized assessments of cognitive and reasoning abilities. This approach aligns closely with the intent of this study to clarify how SHS performance and CAT scores jointly forecast academic success among freshmen in higher education in the Philippines.

Conceptual-Theoretical Mapping

The figure delineates the relationship between Senior High School (SHS) performance and College Admission Test (CAT) scores as predictors of freshman students' academic performance. In this model, SHS performance and CAT scores were considered independent variables, while academic performance during the first semester was the dependent variable. Informed by existing educational theories on academic achievement and student readiness, the framework posits that prior academic performance (SHS grades) reflects students' learning habits, consistency, and foundational knowledge, whereas CAT scores assess cognitive abilities such as reasoning and problem-solving skills. These two variables are anticipated to directly influence students' academic outcomes in college. The arrows in the figure represent the predictive

and correlational relationships among the variables, which were analyzed using statistical tools such as Pearson's correlation and multiple regression analysis. The model further suggests that the combined effect of SHS performance and CAT scores provides a more comprehensive basis for predicting academic success than the use of a single predictor. The framework supports the study's objective of determining which variables significantly predict freshman academic performance and whether both predictors jointly contribute to academic success in a university setting.

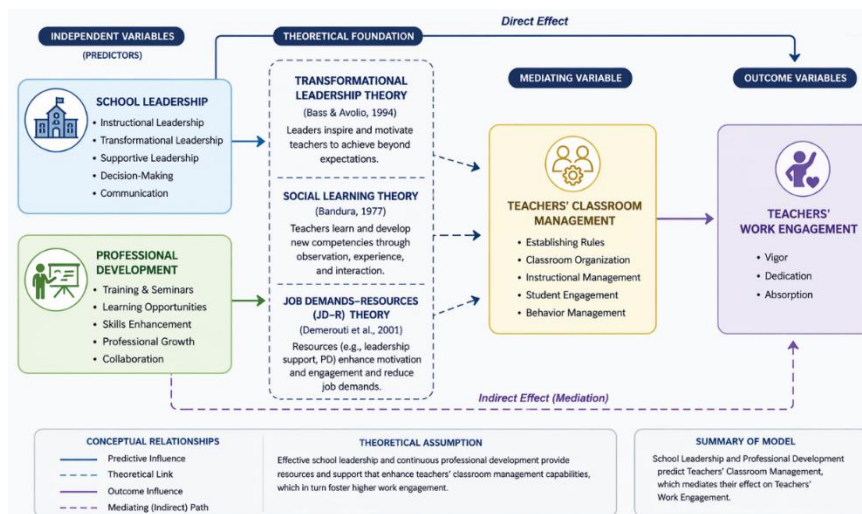


Figure 1. Conceptual-Theoretical Framework Showing Senior High School Performance and College Admission Test Scores as Predictors of Freshman Academic Performance

Methodology

Research Design

This study examined the relationship between Senior High School (SHS) grades and College Admission Test (CAT) scores and the academic performance of first-year college students. It describes the students' backgrounds and their grades in SHS, CAT, and their first college semester. The study also examined whether SHS grades and CAT scores could predict college success. Additionally, regression analysis was used to determine how well these factors predicted college performance.

Research Locale

The study was conducted at Isabela State University, specifically at the Echague Campus, under the College of Education. This institution was selected because it implements an admission process that considers both Senior High School academic performance and College Admission Test results as key criteria for student selection. The availability of complete academic records and the accessibility of relevant data made the locale suitable for investigating the predictive relationship between admission variables and college academic performance.

Research Participants

The respondents of the study were first-year students enrolled in the College of Education at Isabela State University–Echague Campus during the First Semester of School Year 2025–2026. The total population consisted of 305 students from different academic programs, including Bachelor of Early Childhood Education (BECED), Bachelor of Elementary Education (BEED), Bachelor of Physical Education (BPED), Bachelor of Secondary Education (BSED), and Bachelor of Technology and Livelihood Education (BTLED) programs. These respondents were chosen because they possessed complete academic records necessary for the study, including their Senior High School General Weighted Average, College Admission Test scores, and first-semester college academic performance records.

Research Instrument

This study used secondary data obtained from official university records rather than survey questionnaires. The data included the Senior High School General Weighted Average, College Admission Test performance, and first-semester General Weighted Average of the respondents. These records were retrieved from the Office of Student Affairs and the College Secretary of the College of Education. The use of institutional data ensured accuracy, objectivity, and reliability, as the information was officially recorded and verified by university records.

Data Gathering Procedure

Data for this study were gathered from official academic records of first-year students in the College of Education at Isabela State University–Echague Campus for the First Semester of the School Year 2025–2026. Prior to data collection, permission was secured from the university authorities, including the Office of Student Affairs and the College Secretary. Relevant data, specifically the Senior High School (SHS) General Weighted Average, College Admission Test (CAT) scores, and first-semester academic performance (GWA), were obtained from institutional records. The collected data were carefully reviewed, organized, and encoded to ensure accuracy and completeness while maintaining the confidentiality and anonymity of the respondents throughout the process.

Results and Discussions

Problem 1. What is the profile of the respondents in terms of sex and academic program?

Table 1. Demographic Profile of Respondents by Sex and Academic Program

Variable	Frequency n=173	Percent
Sex		
Male	57	32.9
Female	116	67.1
Course		
BECED	29.0	16.8
BEED	30.0	17.3
BPED	29.0	16.8
BSED	56.0	32.4
BTLED	29.0	16.8

Table 1 shows the gender and course distribution of the respondents. Most respondents were female (67.1%), while males accounted for 32.9% of the respondents. The largest group of students was in the Bachelor of Secondary Education (BSED) program (32.4%). The next most common program was the Bachelor of Elementary Education (BEED) program (17.3%). The Bachelor of Early Childhood Education (BECED), Bachelor of Physical Education (BPED), and Bachelor of Technology and Livelihood Education (BTLED) programs each had 16.8% of students. Overall, more female students participated, and there was a fairly even spread across programs, with many in the BSED program.

Problem 2. What is the level of respondents' Senior High School performance, College Admission Test scores, and academic performance?

Table 2. Descriptive Statistics of Senior High School Performance, College Admission Test Scores, and First-Semester Academic Performance

	N	Minimum	Maximum	Mean	Std. Deviation
SHS Performance	173	85	97	91.49	2.76
CAT Performance	173	76.63	97	88.97	4.06
Academic Performance	173	1.4	2.5	1.99	0.23

Table 2 shows the average scores for Senior High School (SHS) performance, College Admission Test (CAT) performance, and first-semester college performance. The average SHS score was 91.49 (SD = 2.76), which means that the students performed well before college. The average CAT score was 88.97 (SD = 4.06), showing good performance on the admission test. In college, the average Grade Weighted Average (GWA) was 1.99 (SD = 0.23), indicating a satisfactory performance in the first semester. Overall, the students performed well in all three subjects.

Problem 3. Is there a significant difference in SHS performance, CAT scores, and academic performance when grouped according to sex?

Table 3. Differences in Senior High School Performance, College Admission Test Scores, and Academic Performance by Sex

	Group Means		t-value	p-value
	Male	Female		
SHS Performance	91.43	91.51	0.18	0.86 ^{ns}
CAT Performance	88.44	88.73	1.08	0.28 ^{ns}
Academic Performance	1.93	2.02	2.43	0.02*

Table 3 shows the differences in Senior High School (SHS) performance, College Admission Test (CAT) scores, and first-semester college performance based on sex. The study found no significant differences between male and female students in SHS performance and CAT scores. This means that both groups were equally prepared for college and performed well on the entrance tests. This is consistent with other studies that state that sex does not affect performance in these areas (Sawey-Ognayon & Afalla, 2022). However, in college, male students performed slightly better than female students in their first semesters. This may be due to differences in how they adjust, learn, and engage in college. Some studies have also shown that gender differences in performance can appear in college, but the results vary (Hendi et al., 2022). Overall, while male and female students start college with similar backgrounds, their first-semester performance may differ. This suggests that other factors beyond admission criteria may affect academic success.

Problem 4. Is there a significant difference in SHS performance, CAT scores, and academic performance when grouped according to academic program?

Table 4. Differences in Senior High School Performance, College Admission Test Scores, and Academic Performance by Academic Program

	Group Means					F-value	p-value
	a	b	c	D	e		
	BECED	BEED	BPED	BSED	BTLED		
SHS Performance	90.1 ^d	91 ^d	91.41 ^d	92.65 ^{abce}	91.2 ^d	5.09	0.001*
CAT Performance	87.51 ^{bd}	90.15 ^{ae}	89.08	89.65 ^{ae}	87.77 ^{bd}	2.71	0.03*
Academic Performance	2.12 ^{bed}	1.97 ^a	1.93 ^{ae}	1.94 ^{ae}	2.06 ^{ed}	4.83	0.001*

Table 4 shows how students' performance in Senior High School (SHS), College Admission Test (CAT) scores, and first-semester grades differ based on their academic program. Students from different programs had different SHS performance levels when they began college. For example, students in the Bachelor of Secondary Education (BSED) program performed better in SHS than others did. This means that students' level of preparation may depend on their chosen field of study. There were also differences in first-semester grades, suggesting that college results vary by program. These differences may be due to different course requirements, learning settings or student traits. This matches past studies that found that academic performance can differ by field because of different expectations and preparation levels (Aquines-Gutiérrez et al., 2022). However, the CAT scores were mostly similar across the programs, indicating that the admission test results were consistent. This supports the idea that standardized tests measure students' abilities evenly across different backgrounds (Sorgente et al. 2024). Overall, while CAT scores are stable across programs, SHS and college performance vary significantly, showing that academic programs affect students' learning outcomes.

Problem 5. Is there a significant relationship among SHS performance, CAT scores, and academic performance?

Table 5. Correlation Analysis of Senior High School Performance, College Admission Test Scores, and Academic Performance

Variables	r-value	p-value
Academic Performance ↔ SHS Performance	-0.48	0.01*
Academic Performance ↔ CAT Performance	-0.47	0.01*
SHS Performance ↔ CAT Performance	0.6	0.01*

Table 5 shows the links between high school grades, college test scores, and first-semester college grades. The results indicate that both high school grades ($r = -0.48$, $p < 0.05$) and college test scores ($r = -0.47$, $p < 0.05$) are strongly connected to college grades. Because lower GWA values indicate better performance, the negative links suggest that better high school grades and test scores lead to better college results. This supports earlier studies that state that past grades and test scores can predict success in college (Hendi et al., 2024; Hendi et al., 2022). In addition, there is a strong positive link between high school grades and test scores ($r = 0.60$, $p < 0.05$), meaning that students who do well in high school also score higher on tests. This matches other studies that state that both grades and test scores show similar academic skills and readiness (Jaehn et al., 2025). Overall, the findings show that high school grades and test scores are important and related indicators of college success, supporting the use of multiple criteria to assess students' readiness for college.

Problem 6. Which among SHS performance and CAT scores significantly predicts academic performance?

Table 6. Summary of Regression Models Predicting Academic Performance from SHS and CAT Scores

Model	R	R Square	Adjusted Square	Std. Error of the Estimate
1	.482a	.232	.227	.19793
2	.534b	.285	.276	.19156
a. Predictors: (Constant), SHS				
b. Predictors: (Constant), SHS, CAT				
c. Dependent Variable: GWA				

Table 6 summarizes the regression models employed to forecast academic performance based on Senior High School (SHS) achievements and College Admission Test (CAT) scores. The findings revealed that SHS performance alone accounted for 23.2% of the variance in academic performance ($R^2 = 0.232$), indicating a moderate level of predictive ability. When CAT scores were incorporated into the model, the explained variance increased to 28.5% ($R^2 = 0.285$), demonstrating that CAT scores added additional predictive value. This suggests that although SHS performance is a more robust predictor, the combination of SHS and CAT enhances the precision of predicting college academic success. This result aligns with previous research that highlights the combined use of high school GPA and admission test scores as offering a more thorough prediction of academic achievement (Jaehn et al., 2024; Jaehn et al., 2025).

Table 7. Analysis of Variance (ANOVA) for the Regression Model Predicting Academic Performance

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	2.484	2	1.242	33.851	0.01*
Residual	6.238	170	.037		
Total	8.722	172			
a. Dependent Variable: GWA					
c. Predictors: (Constant), SHS, CAT					

Table 7 presents the analysis of variance (ANOVA) for regression models. The findings revealed that the model was statistically significant ($F = 33.851$, $p < 0.05$), indicating that the combination of SHS performance and CAT scores significantly predicted academic performance. This implies that the independent variables collectively have a substantial impact on the dependent variables. The model's significance supports the use of multiple predictors to comprehend student performance, aligning with existing research that emphasizes the enhancement of college outcome predictions by integrating academic background and cognitive measures (Sorgente et al., 2024).

Table 8. Regression Coefficients of Senior High School Performance and College Admission Test Scores Predicting Academic Performance

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B		Beta		
(Constant)	5.730	.487		11.773	.000
SHS	-.025	.007	-.311	-3.853	0.000 ^a
CAT	-.016	.004	-.286	-3.545	0.001 ^a

a. Dependent Variable: GWA

Table 8 presents the regression coefficients for SHS performance and CAT scores as predictors of academic success in the first year of college. Both SHS performance ($\beta = -0.311$, $p < 0.05$) and CAT scores ($\beta = -0.286$, $p < 0.05$) were significant. The negative coefficients suggest that higher SHS and CAT scores correlate with lower GWA values, indicating improved academic performance. SHS performance exerts a slightly greater impact, implying that previous academic success is a more crucial factor in forecasting college achievement. Nonetheless, CAT scores also play a significant role, highlighting the importance of both academic background and cognitive skills. This result is consistent with earlier research, which found that high school GPA is the most reliable predictor, while entrance exams add further predictive value (Hendi et al., 2022; Sorgente et al., 2024).

Residual Plot Assessing the Assumptions of Linearity and Homoscedasticity in the Regression Model

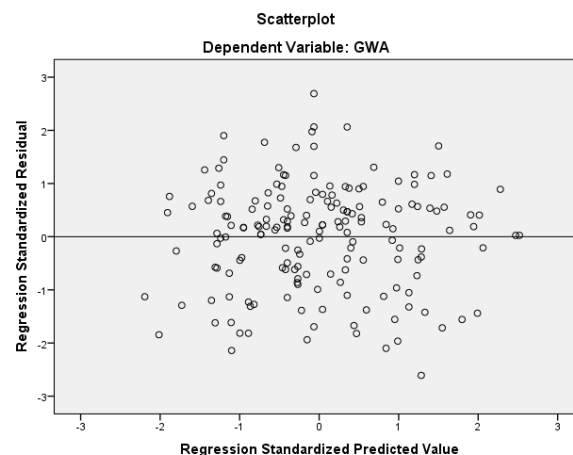


Figure 2. Residual Plot Assessing the Assumptions of Linearity and Homoscedasticity in the Regression Model

Figure 2 shows the residual plot used to assess the assumptions of linearity and homoscedasticity in the regression model. The distribution of the residuals appeared random and did not follow a clear pattern, indicating that the assumption of linearity was satisfied. Additionally, the spread of the residuals remained relatively constant across the predicted values, suggesting that the model met the homoscedasticity assumption. These results confirm that the regression model is appropriate for analyzing the relationship between Senior High School performance, College Admission Test scores, and academic performance. The absence of systematic patterns in the residuals also indicates that the model provides an adequate fit to the data, supporting the validity and reliability of the findings.

Table 9. Model Accuracy Based on Mean Absolute Percentage Error (MAPE)

Mape	7.91%
Accuracy	92.087586683076800%

Table 9 presents the model accuracy using the Mean Absolute Percentage Error (MAPE). The results show a MAPE value of 7.91%, corresponding to an accuracy rate of approximately 92.09%. This indicates that the regression model provides highly accurate predictions of students' academic performance. A low MAPE value suggests that the difference between predicted and actual academic performance is minimal,

confirming the reliability of the model. This supports the effectiveness of SHS performance and CAT scores as predictors of academic success in college education.

Ethical Considerations

Ethical clearance for this study was obtained from the university administration prior to data collection. Permission to access academic records was formally granted by the Office of Student Affairs and the College of Education. The study utilized secondary data from official institutional records, and all information was treated with strict confidentiality. To protect the identity of the respondents, all data were anonymized and no personally identifiable information was disclosed. The handling and processing of data complied with the provisions of the Data Privacy Act of 2012. Furthermore, the data were used solely for academic and research purposes, and all procedures adhered to established ethical standards in educational research.

Conclusion

The findings of this study indicate that both Senior High School (SHS) performance and College Admission Test (CAT) scores are significant predictors of first-year academic performance, with SHS performance demonstrating a slightly stronger influence. The results further show that combining SHS and CAT scores enhances the accuracy of predicting academic success, supporting the use of multiple criteria in admission processes. While no significant differences were observed in SHS and CAT performance when grouped by sex, variations in academic performance across programs suggest that factors beyond admission criteria may influence student outcomes. However, the regression model explained only 28.5% of the variance in academic performance, indicating that a substantial portion remains unaccounted for. This suggests that other factors, such as motivation, study habits, learning strategies, and socioeconomic background, may also play important roles in determining academic success. Despite this limitation, the model demonstrated strong predictive capability and provides valuable insights for improving admission and academic planning in higher education institutions.

Recommendations

Based on the findings of the study, higher education institutions, particularly state universities, are encouraged to adopt a more holistic and data-driven admission policy that integrates both Senior High School (SHS) performance and College Admission Test (CAT) scores. Given that SHS performance showed a slightly stronger predictive influence, institutions may consider placing greater emphasis on prior academic achievement while still utilizing CAT scores to enhance predictive accuracy. In addition, universities should consider program-specific strategies in both admission and academic support, as variations in performance across academic programs suggest differences in learning demands and student preparedness. The implementation of early intervention programs, such as academic advising, bridging courses, and learning support services, is also recommended to assist students who may be at risk of underperformance. Furthermore, policymakers and educational leaders should continuously review and refine admission systems to ensure fairness, inclusivity, and effectiveness in predicting student outcomes. Future research is recommended to explore additional factors influencing academic performance, including motivation, study habits, learning strategies, and socioeconomic background, in order to develop a more comprehensive model of student success in higher education.

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