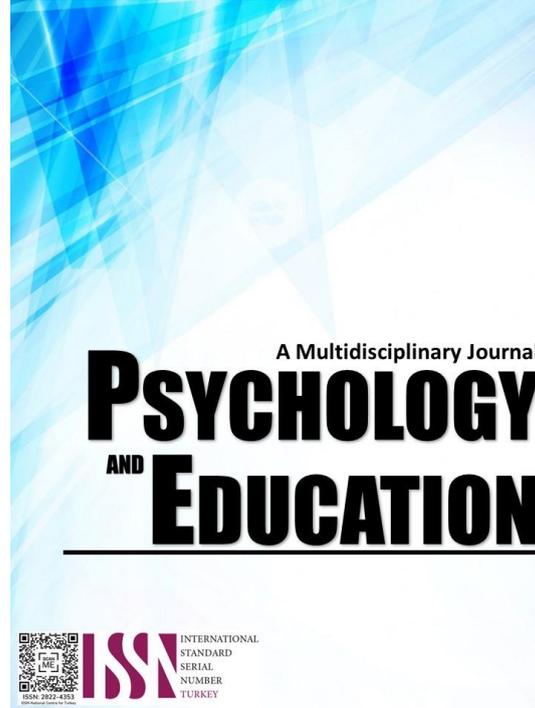


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Correlation Between Students' Entrance Exam Results and Academic Performance in ENSCIMA

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Abstract

Education is one of the most important components in developing a human resource that is required for a country's development in all areas. Students get confidence and self-esteem as a result of these admission tests, and they also gain strength from knowing that they are qualified to pursue studies in that profession. It also contributes significantly to the advancement of an individual's understanding. The study used 239 student-applicants for RSET 2022, 177 came from private schools, and 72 came from public schools. The documentary analysis showed that the average grade of students from private schools in English, Science, and Mathematics was 93 while students from public schools got a grade of 91 in English and Science, and 90 in Mathematics. The percentage scores average obtained by the students from private schools was 67.98 while the public schools was 67.75. Other results showed that there is a significant difference between the academic performance of public and private school students. In terms of RSET results, there is no significant difference between the scores in English and Science while the Mathematics, showed that there is a significant difference between the scores. The RSET results showed that the grades given in the private schools were not parallel to the examination result while that of the public schools were parallel based on the correlational analysis

Keywords: *education, ENSCIMA, correlational analysis, entrance examination*

Introduction

Education is one of the most important components in developing a human resource that is required for a country's development in all areas. Education, in a wide sense, refers to any activity that has a substantial impact on an individual's cognitive, skill, or attitude development. Academic performance refers to a student's status in the conduct of his school activities; as is customary, students follow teachers' instructions and make use of available resources to comprehend and explain their learnings.

The Rizal National Science High School is established to provide gifted Rizaleños with special trainings in Science and Technology, Mathematics and English. Moreover, it aims to develop globally competitive citizens motivated by the love of God, country and concern for the nation. Passing the entrance exam is one of the most important requirements for admission to this institution. A test used by many educational institutions to select students for admission is known as an entrance examination. Exams like these can be given at any level of education, from primary to higher education, but they're more common at higher levels. Based from the observation conducted on the submitted documents of the applicants in the 2022 Rizal Science Entrance Test (RSET), majority of the private school students received higher grades in English, Science and Mathematics subjects than in public school students. High grades may indicate a

high level of intrinsic passion, particular abilities, and parental involvement throughout the academic year.

There are numerous studies that have been conducted on academic achievement and the elements that influence academic performance. In this subject, there is a lot of study on teacher involvement and student motivation (Zimmerman, Schmidt, Becker, Peterson, Nyland & Surdick, 2014). Furthermore, there is educational research that compares standard exams to practical exams (Davison, 2015). However, there appears to be a study void in the literature on the use of standard test results as a predictor of practical examination scores. This gap in the literature is addressed in this study by developing two predictive that use standard examination scores as the independent variable and practical examination scores as the dependent variable. According to Agboola et al. (2014), a substantial association existed between an admission policy and the academic achievement of students when carefully executed admission policies and retention programs were taken into account. According to Ogbonnaya et al. (2014), there is a link between entry qualifying scores and final academic performance. Bautista, Rey, and Suan (2014) conducted a local study that demonstrated the use of a selection model to evaluate students' academic performance and admittance. The study results show that the entrance examination score and academic score both have a role in predicting a student's academic achievement.



The aforementioned evidence has shown that entrance examination has a rich history in the admissions process of Rizal National Science High School and elementary schools both public and private in the Province of Rizal. However, the unanswered question remains whether those admitted through entrance examination perform to the standards of the Science High School they are admitted to. Moreover, it would be prudent to correlate between students' entrance exam result and academic performance in English, Science and Mathematics subjects.

Research Questions

The study examines the correlation between students' entrance exam results and academic performance in EnSciMa sought to answer the following questions:

1. What is the academic performance of the student applicants from public and private elementary schools in English, Mathematics, and Science?
2. What is the level of performance as revealed by the RSET of the student applicants from public and private elementary schools in English, Mathematics, and Science?
3. Is there a significant difference between the academic performance of the student applicants from public and private schools in English, Mathematics, and Science?
4. Is there a significant difference between the level of performance as revealed by the RSET of the student applicants from public and private schools in English, Mathematics, and Science?
5. Is there a significant relationship between academic performance and the level of performance as revealed by the RSET of the student applicants from public schools?
6. Is there a significant relationship between academic performance and the level of performance as revealed by the RSET of the student applicants from private schools?

Literature Review

The importance of entrance tests in a student's life cannot be overstated. Entrance tests assess if a student is ready and prepared to succeed in a classroom setting. These entrance tests determine a student's skill level and, as a result, offer them with a suitable job route throughout their lives. Entrance tests are also given to determine the level a student should be placed in when they first enter a school. It is in the best interests of both the students and the school for kids to be correctly positioned within the school in order to reap the greatest educational benefits.

Students get confidence and self-esteem as a result of these admission tests, and they also gain strength from knowing that they are qualified to pursue studies in that profession. It also contributes significantly to the advancement of an individual's understanding. These entrance tests have a wide range of applications since they give students the opportunity to build a strong educational foundation in today's competitive economy. It's also used to assess a student's ability, sharpness, and knowledge, among other things. Various entrance examinations are used to assess a student's aptitude. These entrance tests assess a student's overall aptitude as well as their ability, sharpness, and knowledge.

It is critical for students to take these entrance examinations seriously because they determine their future, determining whether or not they will be admitted to their preferred school. Inherited abilities and acquired surroundings have a large role in human intelligence. This infringes on poor kids' access to an equal education because anyone with money can afford a high-quality education, for as by hiring well-known private instructors for successful test preparation. Regardless of intrinsic abilities, the children of the wealthy have access to education.

In this study, correlation between students' entrance exam result in Rizal national Science High School and academic performance in English, Science and Mathematics is very important factor to determine in both private and public school in the Province of Rizal. Correlational research like this study play an important role in the development and testing of theoretical models. Once the nature of bivariate relations has been determined, this information can then be used to develop theoretical models. Applicants for the RSET must typically provide a copy of their fifth and sixth grade report cards. In every subject, they must obtain a minimum grade of 85. Upon evaluation of documents, the researchers noticed how the applicants' grades in English, Science, and Mathematics differed between public and private elementary schools, and are interested on how this would connect to their RSET scores.

The applicants' grades in English, Science, and Mathematics from public and private elementary schools was averaged and utilized to see if there is a significant difference between their academic performances. The Mean Percentage Scores in English, Science, and Mathematics of the applicants from public and private elementary schools was



utilized to see if there is a significant difference in their RSET performances. The applicants' RSET results will be correlated with their average grades in public elementary schools. Applicants from private elementary schools was treated similarly. The results of the study will be submitted to the DepEd Division of Rizal and to the Binangonan Sub-Office. It may serve as basis for changes in the grading system in the public and private elementary schools, for the improvement of Rizal National Science High School's admission system, and for future research studies as well. The output of this study is the strategic plan of action of the Division of Rizal whether to implement special adjustments in the field of English, Science and Mathematics curriculum. This study will identify strategic management and strategic planning in school based from the results of the study.

Methodology

Participants and other Sources of Data and Information

This research aims to know if there is a connection between the students' entrance exam result and academic performance in English, Science, and Mathematics Subjects of junior high school student-applicants of Rizal National Science High School. There are 239 student-applicants for RSET 2022, they were all the participants since the study used Total Population Sampling. In these student-applicants, 177 came from private schools, and 72 came from public schools. Academic performance data was taken from the grades of the applicants in English, Science, and Mathematics when they were in Grades 5 and 6. These grades are computed following the prescribed grading system by the Department of Education.

Data Gathering Methods

The study used documentary analysis in determining the academic performance of the student applicants from public and private elementary schools in English, Mathematics and Science subject as reflected in their School Report Card. This study also used the correlational study research design, which is appropriate when two quantitative variables are from the same group of subjects and wants to determine the relationship between the two variables – a similarity between them, not a difference between their means. It is prospective in the sense that it measures the strength of a linear association between students' entrance exam result and academic performance in English, Science and Mathematics.

Data for the entrance exam results was taken from Rizal Science Entrance Test 2022. The series of exams here are standardized which measure aptitude of the student-applicants in EnSciMa subjects. Exams for English and Science Subjects are composed of 60 items while there are 50 items in Mathematics. Test items were based on the prescribed learning competencies by the Department of Education. These exams were validated by school-based experts. Item analysis, difficulty index, and discriminatory index are used to indicate the viability of the instrument to be adapted as a mission test for the entrance examination. The current study, SPSS Statistics for Windows was used. The study used mean and standard deviation. In addition, independent t-test was used to measure significant difference of different variables. Pearson's product-moment correlation coefficient was calculated to determine correlations between students' entrance exam result and academic performance in English, Science, and Mathematics subjects. The significance level is $p < .05$.

Data Analysis Plan

To determine the academic performance of the student applicants from public and private elementary schools in the following subjects English, Mathematics and Science, documentary analysis was used. To determine the level performance as revealed by the RSET of the student applicants from public and private elementary schools in the following subjects English, Mathematics and Science, mean and standard deviation was used. To determine the significant difference between the academic performance of the student applicants from public and private schools in English, Mathematics and Science subjects, independent t-test was used. To determine the significant difference between the level of performance as revealed by the RSET of the student applicants from public and private schools in English, Mathematics and Science subjects, independent t-test was used. To determine the significant relationship between the academic performance and the level of performance as revealed by the RSET of the student applicants from public schools, Pearson-r was utilized. To determine the significant relationship between the academic performance and the level of performance as revealed by the RSET of the student applicants from private schools, Pearson-r was utilized.



Results and Discussion

Table 1. *Level of Academic Performance of Public and Private School Students based on their Academic Progress Report from Grade 5 and Grade 6*

Descriptor	Grading Scale	Descriptor	Grading Scale
Outstanding	90 – 100	Fairly Satisfactory	75 – 79
Very Satisfactory	85 – 89	Did Not Meet Expectations	Below 75
Satisfactory	80 – 84		

*Grade descriptors based on DepEd Order 8, s. 2015

School	Subject	Average Grade	General Average	Descriptor
Private	English	93.20	93.22	Outstanding
	Science	93.25		
	Mathematics	93.17		
Public	English	90.77	90.38	Outstanding
	Science	90.62		
	Mathematics	89.75		

The average performances of students from private schools in English, Science, and Mathematics are outstanding as revealed by the average grades of 93. The general average is 93.22 which also means that they have outstanding performance overall. The performances of students from public schools in English and Science are 91, and in Mathematics is 90, which are all outstanding. While relatively lower than that of the students from private schools, the general average is 90.38, is still outstanding.

Table 2. *Level of Performance of Public and Private School Students based on their scores in RiSci Entrance Test 2022*

School	Subject	Percentage Score	General Average	Descriptor
Private	English	71.99	67.98	Did Not Meet Expectations
	Science	68.94		
	Mathematics	63.00		
Public	English	72.10	67.75	Did Not Meet Expectations
	Science	68.94		
	Mathematics	63.51		

The percentage scores obtained by the students from private schools in the RiSci Entrance Test (RSET) are 71.99, 68.94, and 63 in English, Science, and Mathematics respectively. The general average score is 67.98. These scores, based on the descriptors of DepEd, are all failing grades and thus Did Not Meet Expectations. The percentage of scores of students from public schools in RSET are 72.10, 68.9, and 63.51 in English, Science, and Mathematics respectively. The average score is 67.75. These are also all failing grades based on the descriptors of DepEd. These data show that students from both

public and private schools are of the same level of performance during the conduct of the RiSci Entrance Test.

Table 3. *Significant Difference Between the Academic Performance of Public and Private School Students*

Subject	School Type	Mean	Variance	N	df	p-value	VI
English	Private	93.20	7.05	69	68	2.25E-12	S
	Public	90.77	5.15	69			
Science	Private	93.25	7.86	69	68	8.85E-12	S
	Public	90.62	4.39	69			
Math	Private	93.17	8.20	69	68	1.33E-11	S
	Public	89.75	4.75	69			

The computed p-values of the scores among the subjects English, Math, and Science are all lower than 0.05. This shows that there is a significant difference between the academic performance of public and private school students. This may be supported by the mean of scores as the average grade of students from private schools are higher than the average grade of students from public schools. Two ideas may arise from this. One is that the students from the private schools are relatively more competent academically compared to the students from the public schools. Another one is that private schools are more generous in giving academic performance rating compared to the public schools.

Table 4. *Significant Difference Between the RSET Performance of Public and Private School Students*

Subject	School Type	Mean	Variance	N	df	p-value	VI
English	Private	71.99	5.60	69	68	0.79	NS
	Public	72.10	5.89	69			
Science	Private	68.94	1.94	69	68	1.00	NS
	Public	68.94	2.58	69			
Math	Private	63.00	1.35	69	68	0.003	S
	Public	63.51	0.87	69			

The p-value between the scores obtained by the students in private and public schools in English and in Science are 0.79 and 1.00 respectively. These are both higher than 0.05 which means that there is no significant difference between the scores. This may

mean that the performance of the two sets of students is not at par with each other. This is supported by the average grades in English and in Science which are 72 and 69 respectively. Meanwhile, in Mathematics, the scores obtained by the students in private and public schools have the p-value of 0.003. This p-value is lower than 0.05 critical value. This means that there is a significant difference between the scores. As revealed by the average scores, public school students performed higher than students in private schools.

Table 5. *Significant Relationship Between the Academic Performance and the RSET Performance of Students from Private Schools*

		Correlations	
		Academic Performance	RSET Performance
Academic Performance	<i>r</i>	1	-.147
	N	69	69
RSET Performance	<i>r</i>	-.147	1
	N	69	69

The computed r-value is -.147. This means that the correlation is negative. The relationship between the Academic Performance and RSET Performance of students from private schools is weak. This may also mean that the RSET Performance is not likely to be high just because the Academic Performance is high.

Table 6. *Significant Relationship Between the Academic Performance and the RSET Performance of Students from Public Schools*

		Correlations	
		Academic Performance	RSET Performance
Academic Performance	<i>r</i>	1	.018
	N	69	69
RSET Performance	<i>r</i>	.018	1
	N	69	69

The r-value is .018. This means that the correlation is positive. The Academic Performance and RSET Performance of students from public schools is optimistic. This may further translate to RSET Performance is likely to be high when the Academic Performance of the public school students is high.

Conclusion

Based on the findings presented, the following recommendations were drawn: (1) Present the study to the Department of Education to standardize the grading systems in both public and private schools in the Province of Rizal. (2) The selection committee of the RSET should make a standard rubric to level the grades in English, Science and Mathematics from both public and private schools. (3) Revisit the curriculum in both public and private schools in English, Math, and Science for test construction of the RSET.

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