



# **Predictive Association Between Academic Performance and Aptitude Test**

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# Introduction

- Colleges and universities in the present have made use of the admission test as part of their admission criteria.
- Standardized tests for admission either in the form of aptitude test or achievements has become a common practice in many countries (Curtis et al., 2007).
- Several universities use standardized tests to assist in selecting applicants and as well as identifying educational strengths and weakness (Gawthrop, 2014).



- A study conducted showed a positive correlation between aptitude test and achievement (Rigney, 2003).
- A study conducted by Ferguson, James and Madeley (2002) in which they found that there is fairly good association between academic performance and training.



# Objective

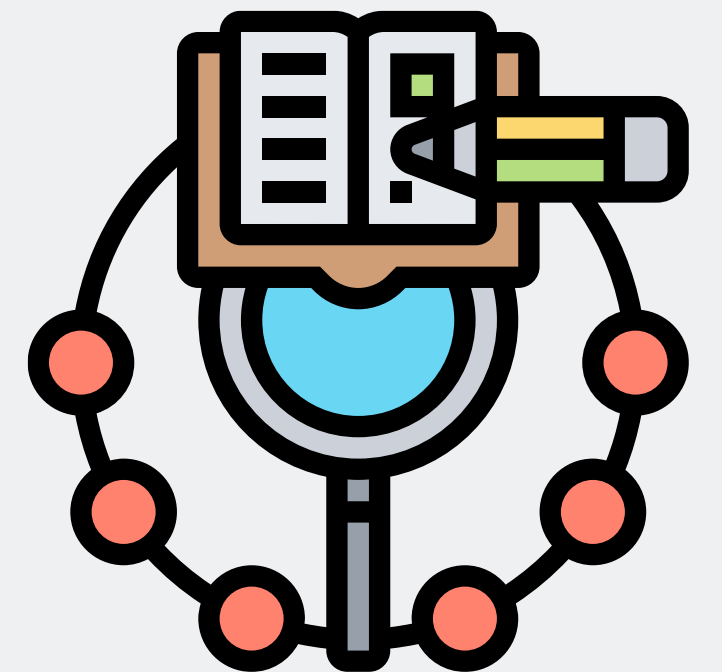
- This research paper examined the predictive value of two aptitude tests, the Kuhlmann Anderson Test (KAT) and a teacher-made web-based test, on the academic performance of the first-year students of a Science and Technology University in the Philippines.





# Methods

- The study utilized data from the actual test takers and enrolled first-year students from 2019-2020.
- The sample was selected through Slovin's Formula.
- Academic performance was measured using the general weighted average (GWA), verified through the university grading portal.





# Methods

- The data was analyzed through SPSS (Statistical Package for the Social Sciences), also known as IBM SPSS Statistics.
- Multiple Regression was used to examine the predicative association between variables



# Results

*ANOVA<sup>b</sup>*

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	916.124	4	229.031	1.236E 1	.000 <sup>a</sup>
	Residual	6302.265	340	18.536		
	Total	7218.388	344			

a. Predictors: (Constant), Math, English, Science, KAT  
b. Dependent Variable: GWA

Table 1 shows that aptitude test scores statistically significantly predict the General Weighted Average (GWA),  $F(4, 340) = 1.236$ ,  $p < .0005$ .



# Results

Model		Unstandardized Coefficients		Standardized	t	Sig.	95% Confidence Interval for B	
		B	Std. Error	Coefficients Beta			Lower Bound	Upper Bound
1	(Constant)	75.734	1.460		5.187E1	.000	72.862	78.606
	KAT	.039	.014	.172	2.690E0	.008	.010	.067
	Science	.019	.027	.042	.708	.479	-.034	.071
	English	.083	.028	.170	2.968E0	.003	.028	.137
	Math	.047	.031	.085	1.519E0	.130	-.014	.108

a. Dependent Variable: GWA

- The multiple linear regression results  $F(4, 340) = 1.236$ ,  $p=0.001$ ,  $R^2 = .127$  indicated that both Kuhlmann Anderson Test and English were statistically significant to the prediction,  $p < .05$ , having Kuhlmann Anderson Test predicted academic performance,  $p=0.008$ .





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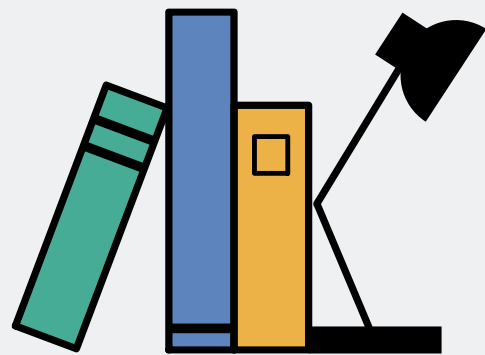
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- Likewise, English showed prediction to academic performance,  $p=0.003$ .



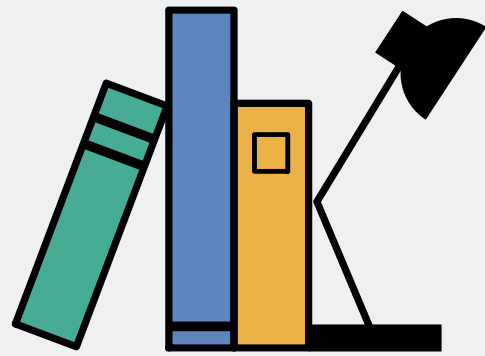
# Conclusion and Recommendation

- Standardized tests are the best predictor of a student's first year success and as well as retention and graduation (Camara & Croft, 2020).
- Standardized tests, therefore, proved to have better predictive performance over teacher-made tests forwarding the recommendation that standardization of tests in the universities can better place students in their career paths.



# References

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*Thank  
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