FINAL PROJECT PRESENTATION

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INTRODUCTION

This study will determine the relationship between the time spent by students revising and their final exam results. It is believed that students who spent more time revising will lead to high performance in their final exams (Everaert P., Opdecam E. & Maussen S., 2017). This study will look at data collected from 35 students whose study time and final exam results were recorded for analysis purposes.

DATA DESCRIPTION

- Data was collected to enable analysis and decision making on the subject. The dataset contains two variables (Revision time and Exam scores). They were continuous variables making linear correlation suitable for analysis. Exam scores was used as the dependent variable while revision time was the predictor variable.
- Descriptive statistics for the variables is as shown in table 1 below.

Table 1: Descriptive statistics

Statistics	Revision Time	Exam Scores
Mean	54.37	70.57
Median	60	79
Standard Deviation	25.94	20.94
Count	35	35

RESEARCH QUESTION AND HYPOTHESES

- Is there statistical significance relationship between the time spent revising and the final exam scores?
- H_0: There is no statistical significance relationship between the time spent revising and the final exam scores.
- H_a: There is a statistical significance relationship between the time spent revising and the final exam scores.
- Alpha was set at 0.05 level of significant.

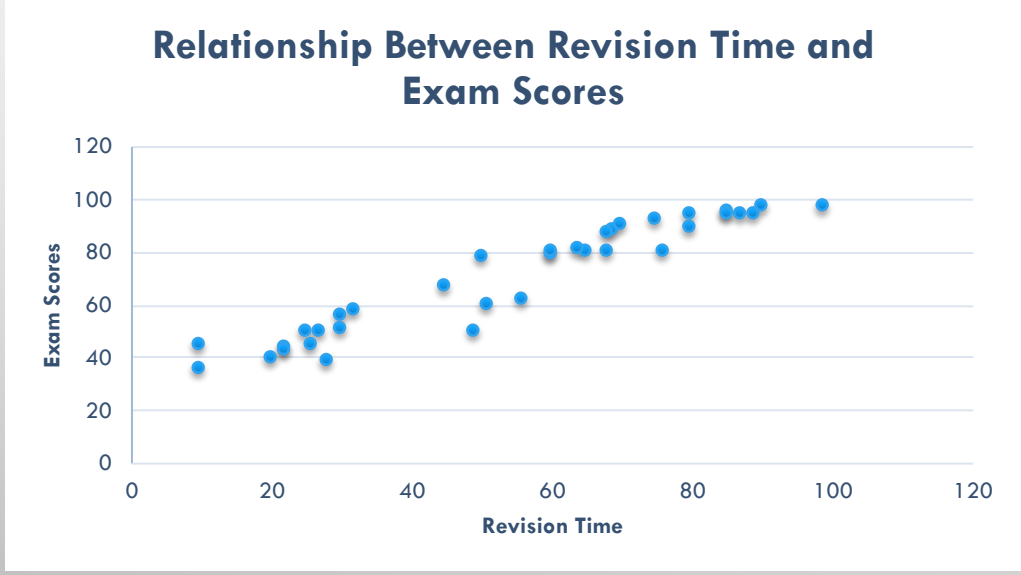
METHODS AND ASSUMPTIONS

- Linear correlation and regression analysis was determined to help in testing the significance of the relationship existing between the two variables.
- The design makes assumptions that has to be met in order for the analysis to continue. The assumption of one independent and one dependent continuous variables was met since we have our two variables (Revision Time and Exams Scores) which were continuous.

METHODS AND ASSUMPTIONS CONTINUED…

- The assumption of linearity was tested using a scatter plot the results shown in figure 1 below indicates a linear relationship between the variables.

Figure 1: Scatter plot



RESULTS AND ANALYSIS

- Data analysis was conducted using linear correlation and regression analysis to enable conclusion and correct decision making on the subject.
- Table 2 shows the correlation between the two variables. The table shows that r = 0.96 which implies there is a very strong positive relationship between the variables.

Table 2: Correlation table

	Revision Time	Exam Scores
Revision Time	1	0.96
Exam Scores	0.96	1

RESULTS AND ANALYSIS CONTINUED …

- Table 3 shows the summary statistics of the model. According to the analysis, $R^2 = 0.92$ implying that 92% of the variation in exam results is explained by the revision time of students.
- Table 3: Summary statistics

SUMMARY OUTPUT	
Regression Statistics	
Multiple R	0.959384
R Square	0.920419
Adjusted R Square	0.918007
Standard Error	5.995268
Observations	35

RESULTS AND ANALYSIS CONTINUED…

- Table 4 shows the test of the model in order to make decisions. The results shows that the model was significant where r = 0.96, $F\ (1,\ 33) = 381.67$, $p < 0.01$ which implies that we reject the null hypothesis and conclude that there is a statistical significance relationship between the time spent revising and the final exam scores (Warner R., 2012).
- Table 4: ANOVA table

ANOVA					
	df	SS	MS	F	Significance F
Regression	1	13718.44	13718.44	381.6696	1.05E-19
Residual	33	1186.127	35.94324		
Total	34	14904.57			

RESULTS AND ANALYSIS CONTINUED…

- Coefficients were tested to examine the linear equation of the model that enables forecasting. Table 5 shows the results of the analysis. The analysis shows that Revision time was significant where $b = 0.77$, $t(0.05) = 19.54$, $p < 0.01$ and t-critical is 1.96 implying revision time coefficient was statistically significant and the linear regression equation is given as follows; Exam results = 28.46 + 0.77*Revision Time. This implies that an increase of time by 1 minute increases exam results by 0.77 marks.
- Table 5: Coefficient table

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%
Intercept	28.46296	2.381733	11.95052	1.56E-13	23.61728	33.30863
Revision Time	0.77446	0.039642	19.53637	1.05E-19	0.693807	0.855112

CONCLUSION

- According to the results, there is a significant relationship between the time spent reading and the final exam scores for students. All students are therefore advised to put more effort on studying in order to attain good grades and greater achievements significantly (Jung Y., Leung A. & Miller J., 2016). Other variables contributing to performance of students were not accounted for in this study but time spent showed a greater relationship which makes it a major contributor to the performance. Teachers and parents should support the students fully in creation of the time needed for revision so as to attain good results in their exams.

REFERENCE

Everaert, P., Opdecam, E., & Maussen, S. (2017). The relationship between motivation, learning approaches, academic performance and time spent. Accounting Education, 26(1), 78-107.

Warner, R. M. (2012). Applied statistics: From bivariate through multivariate techniques. Sage Publications.

Jung, Y., Leung, A., & Miller, J. (2016). Do smart students study harder? An investigation of efficient effort among undergraduate university students. Journal of Economics and Economic Education Research, 17(1), 25.