A STUDY ON FACTORS AFFECTING ACADEMIC PERFORMANCE AMONG
UNIVERSITI MALAYSIA SABAH STUDENTS

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THIS DISSERTATION IS SUBMITTED IN PARTIAL FULFILLMENT OF THE
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IJAZAH: Ijaran sajana muda dengan zains dengan kepujian.

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ABSTRACT

This study is mainly about the factors affecting student's academic performance in Universiti Malaysia Sabah. The objectives of this find out are to study the trend of attendance among students taking Statistic Economy subject to examine the relationship between student attendance and academic performance and to determine the effect of other demographic factors on academic performance. Data collection by means of distribution of questionnaires to students enrolled in Statistic Economy subject. There are 115 students who have participated in this survey. There are few tests used in this research to analyze the data collected. Those are descriptive analysis, normality test, Independent-groups t-tests, Kruskal Wallis test, Spearman rank correlation coefficient test and multiple regression analysis. The result shows the effects of attendance, family background, entry qualification, hours of study and gender on student's academic performance. Student's academic achievement has relation with tutorial attendance and student's entry qualification. Other than that, there is no correlation between student's academic performance and other demographic factors like family background, hours of study and gender. Based on the multiple regression analysis, it illustrates that STPM leavers ($\beta_{STPM} = 21.19$) and Foundation leavers ($\beta_{Foundation} = 11.67$) are the significant factors affecting academic performance at 5% level of significance.
KAJIAN TENTANG FAKTOR-FAKTOR YANG MEMPENGARUHI PENCAPAIAN AKADEMIK DALAM KALANGAN PELAJAR UNIVERSITI MALAYSIA SABAH

ABSTRAK

Kajian ini adalah terutamanya tentang faktor-faktor yang mempengaruhi pencapaian akademik pelajar di Universiti Malaysia Sabah. Objektif kajian ini adalah untuk mengkaji trend kehadiran di kalangan pelajar yang mengambil mata pelajaran Statistik Ekonomi, mengkaji hubungan antara kehadiran pelajar dan prestasi akademik dan menentukan kesan faktor demografi yang lain terhadap prestasi akademik. Pengumpulan data telah dijalankan melalui pengedaran soal selidik kepada pelajar yang mengikuti Statistik Ekonomi. Terdapat 115 pelajar yang telah mengambil bahagian dalam kajian ini. Terdapat beberapa ujian yang digunakan dalam kajian ini untuk menganalisis data yang telah dikumpul. Antaranya, analisis deskriptif, ujian kenormalan, ujian t tak bersandar, ujian Kruskal Wallis, ujian pekali korelasi Spearman dan analisis regresi berganda. Hasil kajian menunjukkan kesan kehadiran, latar belakang keluarga, kelayakan masuk, waktu pengajian dan jantina terhadap prestasi akademik pelajar. Terdapat hubungan antara pencapaian akademik dan kehadiran tutorial serta kelayakan masuk pelajar yang telah mengambil bahagian dalam kajian ini. Selain daripada itu, tidak ada hubungan antara prestasi akademik pelajar dan faktor-faktor demografi yang lain seperti latar belakang keluarga, jumlah waktu belajar dan jantina. Mengikut hasil kajian dari analisis regresi berganda, ia menunjukkan bahawa pelajar lepasan STPM ($\beta_{\text{STPM}} = 21.19$) dan pelajar lepasan Asasi ($\beta_{\text{Asasi}} = 11.67$) merupakan faktor yang mempengaruhi prestasi akademik pelajar pada 5% tahap kepekaan.
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LIST OF SYMBOLS

+  addition
-  subtraction
=  equal to
≠  not equal to
≥  greater or equal to
Σ  summations
>  more than
<  less than
%  Percentage
R  Simple correlation coefficient
R²  Coefficient of multiple determination
siq-p  significance p-value
α  level of significance
α  Cronbach alpha
Y  Dependent variable
W  Independent variables
Ω  Coefficient
Ω₀  Constant term of the model
k  Total number of independent variables
i  Coefficient observation
j  Coefficient observation
u  Error term of the model
n  Sample sizes (number of observations)
N  Number of all possible models
H₀  Null hypothesis
H₁  Alternative hypothesis
μ  Mean
σ²  Variance
σ  Standard deviation
var  Variance
E  Expected value
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CHAPTER 1

INTRODUCTION

1.1 Introduction

There were a number of researchers had been carried out to study the factors affecting academic performance. Academic achievement was influenced by attendance (Romer, 1993), family background (Devadoss and Foltz, 1996), entry qualification (Geiser and Santelices, 2007), gender (Nyamapfene, 2010) and hours of study per week (Wan Zah Wan Ali et al., 2008).

Academic achievement or academic performance means the outcome of education. It is the extent to which a student, teacher or academic institution as achieved their educational goals. Academic performance was commonly measured by examinations or continuous assessment (Cambridge University Reporter, 2003).

There were evidences to show that attendance highly influences students’ academic performance (Romer, 1993). Basically attendance means the action or state of going regularly to or being present at a place or event. The synonyms of attendance are presence, appearance, and turnout (Dictionary of Education, 1973). Normally attendance of students at universities or colleges was collected using a paper based logbook which held by the subject lecturer.

According to Considine and Zappala (2002) socially, educationally and economically advanced parents encourage a high level of achievement in their children. Students from high social economic backgrounds were well exposed to scholastic materials which support their intelligence.

The entry qualification affects academic performance at university (Nyamapfene, 2010). This study focused on investigating possible effects of entry qualification on students’ performance.
Pre-university performance in Matriculation, Sijil Tinggi Persekolahan Malaysia (STPM), Foundation, Diploma and others are taken into consideration. It was important to identify which pre-university admission needs extra level of priority.

Higher learning institutes are mostly dominated by female students. This female dominance is a part of higher education courses specifically in statistics, science and mathematics in Malaysia. According to Nyamapfene (2010) gender bias in academic performance should be studied.

According to Wan Zah Wan Ali et al. (2008) students who were capable of managing their time wisely perform better in their academic achievement. Thus, their future is granted. Students always find it very difficult to manage their time well for studies. They usually get distracted by negative elements like watching movies, chatting with friends, and browsing internet until late night.

This case was studied using data collected from both survey and administrative information. First, attendance was monitored carefully throughout the semester provide accurate measurement of attendance rate. Second, factors were gathered using questionnaire distributed among students.

1.2 Problem Statement

This is a technology era where every details and information could be gathered in just one click. The X and Y generations are advanced technologically or commonly known as “clickers” knows how to gather information and subject matter even without going to class. Now online notes are available in official student portal at respective educational institutions. Although attendance was made compulsory, students seem to be not interested in attending lecturers or tutorials. Therefore, it is vital to investigate the effect of class attendance to academic performance in this networked environment. Apart from that, when poor performance by student goes unchecked, the university loses its reputation. Therefore the university is concerned about the quality of education and maintenance of standards. Hence, factors affecting academic performance must be studied with specific reference to family background, entry qualification, gender and hours of study per week.
1.3 Aim and Objectives
In this study, there are several objectives that are aimed to be achieved. The objectives of the research are:

i. To find out trend of attendance among students taking Statistical Economy subject.
ii. To examine the relationship between student attendance and academic performance.
iii. To investigate the factors of student’s academic performance.

1.4 Scope of the Study
A study of student’s attendance at lecture and tutorial based activities in Statistic Economy subject during a full academic year (September 2014 to January 2015) in Faculty of Science and Nature Resources (FSSA), Universiti Malaysia Sabah (UMS) was designed. Students from Mathematics with Economics and Mathematics with Computer Graphic represented by first year, second year, and third year and extended attending Statistical Economy class were selected. There were total of 176 students. Students were expected to attend lectures and tutorials over fourteen-week period and attendance was made compulsory to all despite the accessibility of online notes. First, student attendance at lectures and tutorials, recorded using a paper based log book where students were required to sign as the evidence of their attendance. Absent to any lecture or tutorial letter must be provided to the lecturer otherwise disciplinary actions will be taken. Second, information on family background, entry qualification, gender and hour of study per week were gathered using questionnaire distributed among students.

1.5 Significance of Study
The study would help researchers to understand the effect of attendance on academic performance in UMS. This study will also help the higher learning institutes in policymaking about attendance.
1.6 Report Structure

The remainder of the paper was organized as follows. The next section of the paper reviewed existing literatures on the relationship between attendance and academic performance. The third section of the paper described the methods to be used in this study. The following chapter presented the findings of this study. At last chapter, the findings of this study were discussed.
CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

There were many researchers who have endeavored to find the relationship between attendance and academic performance. Romer (1993) was the first researcher to study the relationship between student attendance and academic performance. There was significant positive relationship between attendance and academic performance (Romer, 1993; Andrietti and D'Addazio, 2012; Nyamapfene, 2010; Ryan et al., 2010; Aden et al., 2013; Bevitt et al., 2010; Credé et al., 2010). According to Credé et al. (2010) attending lectures were important because students are not only obtaining more knowledge other than in textbook and online notes but also to improve their contact, listening and performance skills through presentation, revision and etc.

There were additional researches had been carried out to identify the factors affecting academic performances. Family background (Devadoss and Foltz, 1996), entry qualification (Geiser and Santelices, 2007), gender (Nyamapfene, 2010) and hour of study per week (Wan Zah Wan Ali et al., 2008) were also factors effecting academic performance.

Family social economy status which included parents’ education and parents’ income were related to students' academic performance. That is students from high social economy background perform better than students from low social economy background.

The third dependent variable was entry qualification which is supported by Geiser and Santelices (2007) showed in their study that pre-university qualification affects future performance. When the entry qualification is high, then the academic performance is likely to be high and vice versa.
According to Nyamapfene (2010), in his research paper he could not confirm that gender influences academic performance among university students. Higher learning institutes are mostly dominated by female. Therefore, further research should be carried out to study the gender factor.

Moving on to fifth factor, hours of study per week does give impacts on students’ academic performance (Wan Zah Wan Ali et al., 2008). Kelly (2004) explained that a good time management has strong positive relationship with students’ academic achievement.

2.2 Online Class Notes and Academic Performance
Nyamapfene (2010) reported that class attendance highly affects academic performance of students with online notes. Online notes were used to aid the learning process where subject covered in lecture classes are posted on the internet. Since the tutor-marked assignments were also posted on web, lecture class had become less attractive to students which lead poor attendance. If this variable is not controlled, it may manipulate the result of the study. Therefore, the researchers controlled the effect of online notes on academic performance by keeping online notes as control factor.

2.3 Mandatory Class Attendance and Academic Performance
The study by Nyamapfene (2010) examined absenteeism and academic performance are strongly correlated. Generally attendance was made compulsory in every education institutions but in this study the author observed the relationship between attendance and exam grade when there is no mandatory class attendance. Another researcher explained that self-reported exams were always inaccurate where students are able to cheat which affects the relationship between attendance and academic performances (Andrietti and D’Addazio, 2012). Therefore class attendances should be monitored closely to avoid data errors as suggested by Andrietti and D’Addazio (2012).
While other studies examined the relationship and factors affecting class attendance and academic performance, an article by Bevitt et al. (2010) proposed measurement to avoid poor attendance in lectures. The suggestions were imposing mandatory class attendance and monitoring students’ attendance closely in lectures. Thus, create another possible path for absent and underachieving to excel in their academic performance. This was proved to be an effective way to create strong positive relationship between absenteeism and academic performance.

2.4 Students’ Characteristic and Academic Performance

As Andrietti and D’Addazio (2008) observed in their study unobservable factors like each student ability, effort, and motivation highly affects lecture attendance. This research paper explained that highly motivated students attend lectures more frequently and consequently obtain better grade. Unobservable individual characteristic in students influence their learning outcome. Following on Ryan et al. (2010) research paper, non-cognitive ability and other individual difference such as motivated, dedicated and future-orientated students are more likely to achieve good grades and attend lectures.

Other than that, the poor students in higher learning institutions with low earning were also obtaining poor grades. They don’t attend lectures frequently because they are working part time to pay their tuition fees. However poor students who were willing to take risk and considering their future undertakings work hard to attain good results (Ryan et al., 2010). The meta-analytic review from research paper written by Crede’ et al. (2010) stated that attendance and grade outcome have strong relationship and attendance and student characteristics have moderate relationship.

These research papers reported that students with good attitude are often attends lecture and excels in their academic performance. These studies surveyed the effect of student’s attendance on academic achievement by using correlation analytic technique. The results obtained showed strong positive relationship between student’s attendance and academic achievement.
2.5 Literature Review on Methodology

There were number of methods used to find the relationship between the dependent variable (academic performance) and independent variables (attendance, family background, entry qualification, gender and hour of study per week). Among the methods used were distributing survey form, data collection and sampling, reliability test, factor analysis, correlation test and many more (Andrietti and D'Addazio, 2012; Nyamapfene, 2010; Devadoss and Foltz, 1996).

Researchers used factor analysis to study the independent variables in their research paper (Micheal, 1989). Other than that, many used reliability test in their studies. Donnelly and Kurtz (1999) explained that reliability test was tested to know the quality or reliability of the survey form. Reliability is measured by using Cronbach's alpha. It is most commonly used when there are multiple Likert questions in a survey questionnaire that form a scale from one to five. However, reliability test was not tested in this study because the survey used to collect data does not consist of Likert scale (Cohen and Swerdik, 2005).

Independent T-test was used to compare means between two independent groups while one way Anova test was used to compare means between more than two independent groups if they are significantly differs from one another (Gliner et al., 2009).

2.6 Conclusion

The literature review proved there were significant relationship between attendance and students' academic performance, family background and students' academic performance, entry qualification and students' academic performance, gender and students' academic performance and finally hour of study per week and students' academic performance. Although most of the study examined the relationship between students' characteristic and academic performance, this variable was controlled in this study so that the effects of extraneous variables doesn't give large impact on academic performance. Other than that, availability of online notes and mandatory class policy were also remaining as controlled factors in this study.

Therefore this research paper would like to study the relationship between these five factors, attendance, family background, entry qualification, gender and hour of study per week with students' academic performance in FSSA, UMS.
CHAPTER 3

METHODOLOGY

3.1 Introduction

Chapter 3 explains methods and steps that were followed in this study. Methodology section in a research paper provides the suitable and effective methods to be carried out in order to get more accurate results. Data collection, sampling, data analysis, and evaluation of research results were used in this study (Weissburg and Buker, 2007).

3.2 Sampling and Data Collection

The target population of this study was students who enrolled in Statistic Economy subject in the Faculty of Science and Natural Resources in University Malaysia Sabah (UMS). A sample of 115 students in Statistical Economy class comprised of first, second and third year students were included in this study. The course was delivered in two hours lecture and one hour tutorial per week over fourteen-week period to first year students enrolled in Mathematics with Economy and Mathematics with Computer Graphic degree programs. Second and Third year students also joined the class to improve their grade.

Lecture and tutorial attendance were collected by the lecturer every week over fourteen-week period. At the beginning of the course, lecturer told the class that attendance is compulsory with online notes available. However mini-project and assignment marks was not calculate as both of the components involve non-face to face teaching which means there is no attendance to be calculated.
REFERENCES


