ATTITUDE STRUCTURE TOWARDS LECTURE ABSENTEEISM AMONG SCIENCE STUDENTS IN UNIVERSITI MALAYSIA SABAH

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THIS DISSERTATION IS SUMMITED IN THE PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF BACHELOR OF SCIENCE WITH HONOURS

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CERTIFICATION

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Signature

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ABSTRACT

Absenteeism of students does happen although university believed that attendance is one of the important parts of higher education. Student tends to skip lectures and tutorials although attendance of student was taken. The objectives of the study are: a) to determine the attendance rate of student; b) to study the remedial actions of students if they absent in class and c) to investigate the attitude structure of student towards absenteeism. Data were collected using questionnaire from 418 Universiti Malaysia Sabah (UMS) science students which included three faculties: a) Faculty of Science and Natural Resources; b) Faculty of Computing and Informatics; c) Faculty of Sustainable Agriculture. Sets of questionnaire which consisted demographic characteristic of student, statements about attitude of students towards absenteeism and remedy action that student most probably would take if they missed class. Reliability test was conducted on the attitude statements toward absenteeism. Factor analysis then applied to explore the factor structures of factor affecting student to attend their lecture. Besides that, Mann-Whitney test on attendance rate and gender were used to identify whether there exist mean difference between the independent variables. Mann-Whitney test also been used to test significant difference between factor score and gender. Kruskal-Wallis Test was used to test the significance difference between attendance rate and years of study. Besides that, Kruskal-Wallis Test was also used to test the significance difference between factor score and years of study. In addition, correlation was applied to find out the relationship between factor scores and attendance rate. From the results, 6 factors were produced for student attitude structure towards absenteeism: inevitable event (factor 1), private commitment (factor 2), personal interest (factor 3), time factor (factor 4), subject material (factor 5) and travel case (factor 5). Factor scores for each factor were obtained using Anderson-Rubin method. The result indicated that there were significant mean differences between lecture attendance rate and years of study. For the nonparametric correlation test, negative relationship (r=-0.230) existed between number of lectures attended by student and time factor with p-value of 0.000<0.001. Travel case and lecture attendance rate showed positive relationship (r=0.203) which have the p-value of 0.000<0.001.
STRUKTUR SIKAP TERHADAP KETIDAKHADIRAN KE KULIAH DALAM KALANGAN PELAJAR SAINS UNIVERSITI MALAYSIA SABAH

ABSTRAK

Ketidakhadiran pelajar ke kuliah berlaku walaupun pihak universiti percaya bahawa kehadiran merupakan salah satu element yang penting dalam pengajian tinggi. Pelajar tidak hadir ke kuliah dan kelas bimbingan walaupun kehadiran diambil. Objektif untuk kajian ini adalah: a) untuk mendapatkan kadar kehadiran pelajar; b) untuk mengetahui tindakan pemulihan yang diambil oleh pelajar jikalau tidak hadir ke kelas dan c) untuk mencari struktur sikap pelajar terhadap kehadiran. Data dikumpul melalui 418 set soalan soal-selidik daripada pelajar sains Universiti Malaysia Sabah termasuk tiga fakulti berikut: a) Fakulti Sains dan Sumber Alam, b) Fakulti Komputeran dan Informatik dan c) Fakulti Pertanian Lestari. Soalan soal selidik mengandungi soalan yang berkaitan dengan latar belakang pelajar, kenyataan-kenyataan yang berkaitan dengan struktur sikap pelajar terhadap kehadiran dan tindakan pemulihan yang diambil oleh pelajar jikalau tidak hadir ke kuliah. Ujian kebolehpercayaan digunakan untuk mengkaji kenyataan berkaitan dengan struktur sikap pelajar terhadap kehadiran. Analisis faktor telah digunakan untuk mencari struktur faktor pelajar yang menyebabkan ketidakhadiran berlaku. Selain itu, ujian Mann-Whitney digunakan untuk membandingkan antara kadar kehadiran dan jantina, dan juga skor faktor dan jantina. Ujian Kruskal-Wallis telah digunakan untuk membandingkan kadar kehadiran dengan tahun pengajian. Ujian Kruskal-Wallis juga telah digunakan untuk membandingkan skor faktor dengan tahun pengajian. Dari keputusan analisis, 6 faktor telah dikenalpasti mewakili struktur sikap pelajar terhadap kehadiran: Sebab yang tidak dapat dielakkan (faktor 1), komitmen peribadi (faktor 2), minat sendiri (faktor 3), faktor masa (faktor 4), bahan pengajian (faktor 5), keadaan masa perjalanan (faktor 6). Skor faktor didapati melalui cara Anderson-Rubin. Terdapat perbezaan kadar kehadiran kuliah dengan tahun pengajian. Cuma faktor 4 (faktor masa) mempunyai hubungan yang sifar dengan kadar kehadiran. Untuk ujian korelasi bukan parameter, terdapat hubungan yang sifar (r=-0.230) wujud antara bilangan kuliah yang dihadir oleh pelajar dan faktor masa dengan nilai p 0.000<0.001. Faktor keadaan masa perjalanan dan kadar kehadiran kuliah menunjukkan nilai korelasi positif (r=0.203) dengan nilai p 0.000<0.001.
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LIST OF SYMBOLS AND ABBREVIATIONS

+  addition
-  subtraction
×  multiplication
=  equal to
\( \alpha \)  Cronbach’s Alpha Coefficient
\( k \)  number of items
\( s_i^2 \)  variance of the \( i \)th items
\( s_r^2 \)  variance of the total score form by summing all items
\( s^2 \)  sample variance
\( x_i \)  sample \( i \)th observations
\( \bar{x} \)  sample mean
\( n \)  number of observation
\( \sum \)  summation of
\( p \)  number of variable
\( m \)  number of unobservable factor
\( r_{ij} \)  correlation between variable \( i \) and \( j \)
\( R \)  correlation matrix
\( Corr \)  correlation value
\( \mu \)  population mean, mean vector
\( \lambda_{ij} \)  loadings
\( \varepsilon \)  deviation of \( Y \) from its mean value in a regression, the error term
\( \Lambda \)  product of orthogonal and diagonal matrix
\( \text{var} \)  variance
\( \text{cov} \)  covariance
\( \psi \)  diagonal of matrix
$$a_{ij}$$  partial simple correlation coefficient between variables $$i$$ and $$j$$ factor

$$r_{ij}$$  simple correlation coefficient between variables $$i$$ and $$j$$ factor

KMO  Kaiser-Meyer-Olkin

PCA  Principle component analysis

PAF  Principal axis factoring

$$T$$  t test value

$$\bar{X}$$  sample mean of group 1

$$\bar{Y}$$  sample mean of group 2

$$\mu_1$$  population mean of group 1

$$\mu_2$$  population mean of group 2

$$m$$  number of observation of group 1 in t-test

$$n$$  number of observation of group 2 in t-test

$$v$$  degree of freedom to find critical value of t

$$U$$  Mann-Whitney test value

$$R$$  rank in Mann-Whitney

$$S_{xx}$$  sum of square of differences between $$x$$ and its mean

$$S_{yy}$$  sum of square of differences between $$y$$ and its mean

$$S_{xy}$$  sum of product between difference of $$x$$ and $$y$$ with their respective mean

$$r'_s$$  Spearman correlation coefficient

$$H$$  Test statistic for Kruskal-Wallis

$$R_i$$  sum of ranks for each group

$$N$$  total sample size

$$n_i$$  sample size of a particular group
CHAPTER 1

INTRODUCTION

1.1 Overview
Absenteeism refers to the practice of being frequently staying away from work or school, especially without good reason while attendance is defined as the action or state of going regularly to or being present at a place or event. University or faculty tend to believe that student attendance is one of the integral parts of higher education. However, case of students skipping class appears to be an increase (Massingham and Herrington, 2006) and this cause attention due to potential negative impacts on students, their peers, teachers and even wider society. Photo 1.1 showed the example of attendance list of Faculty of Science and Natural Resources and Photo 1.2 showed the lecture hall of Universiti Malaysia Sabah, Kota Kinabalu, Sabah.

From Andrietti (2014) study, attendance has its importance on academic performance. There is a positive and significant effect of lecture attendance on academic performance. Attendance of students to lecture also important in development of student’s social skills and personal development such as sense of responsibility, and good work habits (Cohn and Johnson, 2006).

Attending to class is a professional socialization, where student learns aspects of the culture of their chosen path, including knowledge, soft skills, moral values and discipline (Persky et al., 2014). In the way of attending class, student have the opportunity to interact with faculty who use techniques that help student involves in learning process will help develop social skills, professionalism and self-discipline.

In Massingham and Herrington (2006) study, attitude of students toward attending class and learning also will affect the rate of attendance. When student absent in class or tutorial in condition that there are no health and lifestyle factor involved, the factors that influences the attendance is student attitudes to learning and motivation which are “the topic was boring” and “I don’t like the subject”.

UMS
UNIVERSITI MALAYSIA SABAH
Photo 1.1 Example of attendance list of Faculty Science and Natural Resources, Universiti Malaysia Sabah, Kota Kinabalu, Sabah.

1.2 Problem Statement
Attendance of student to lecture is important. However, absenteeism of students still occurs and becoming a common phenomenon especially in universities. The study done by Andrietti (2014), which support that attendance of students in lectures will result in higher academic achievement. Besides that, there are also positive effect of attendance which included development of important soft skills and personal development such as responsibilities and social skills (Cohn and Johnson, 2006). In study of Mearman et al. (2014), the important factor that likely would increase the probability of increasing attendance was the attitude of students. It is important to
understand the attitude structure of student towards absenteeism to develop a strategy to reduce absenteeism.

Photo 1.2 Lecture hall of Universiti Malaysia Sabah, Kota Kinabalu, Sabah.

1.3 Aim and objective
The aim of the study was to examine the perspective of students toward absenteeism which also included following objectives:

a) To determine the attendance rate of student and their relationship with demographic characteristic
b) To study the remedial actions of students if they absent in class
c) To investigate the attitude structure of student towards absenteeism

1.4 Scope of study
The focus of this study was Universiti Malaysia Sabah (UMS) science students, which included Faculty of Science and Natural Resources (FSSA) in Kota Kinabalu, Sabah, Faculty of Computing and Informatics (FKI) located in UMS Labuan, Sabah and
Faculty of Sustainable Agriculture (FPL) located in UMS Sandakan, Sabah. Survey was carried out by using sets of questionnaire which adopted online. Sample size was 418 students of UMS, as sample size of 300 was suggested by Tabachnick and Fidell (2007). Unfortunately, the study was only been carried out at UMS only due to the limitation of time and cost. Questionnaire prepared focused on the reason of absent class, remedial actions and some basic information such as course and years of study.

1.5 Report structure
This study consisted of five chapters. This report started with Chapter 1 which consisted the overview of students absenteeism and attendance, followed by problem statement which then followed by aim and objective of study, scope of study as well as this report structure section. Chapter 2 included the review of previous literature on absenteeism (factors/attitude structure). Next, Chapter 3 consisted of methodology which provided the method and statistical analysis that been used in this study. Chapter 4 consisted of all the results and interpretations from those statistical analyses. Lastly, Chapter 5 included discussion, limitation of study, recommendations and conclusion for this study.
CHAPTER 2

LITERATURE REVIEW

2.1 Introduction
This chapter reviews previous literatures on attitude structure of student towards lecture absenteeism and their perspective towards absenteeism in lecture. This chapter also reviewed on how other researchers study the attitude structure of student towards absenteeism.

2.2 Important of attendance
In higher education level such as university, attendance of student to class is important and it is an integral part of education system. In Cohn and Johnson (2006) study, higher rate of attendance led to higher achievement in academic performance. In addition, attendance also offer development of soft-skills and personal development such as responsibility, good work habits and improved social skills. There is also the same founding in Andrietti (2014) study, where there is positive and significant effect of attendance on academic performance. Moreover, in Massingham and Herrington (2006) study, student attendance is influenced by many factors including student attitudes about learning, assessment methods, technology, lifestyle-related pressures and student-teacher relationship.

2.3 Attitude of students towards attendance
According to study done by Persky et al. (2014) in United State schools of pharmacy, there are factors that suggest that there is lack of student engagement, in term of learning actively and lively classroom. The reasons that contribute to student absenteeism are because students think that their lecturers are predominately lecture, lectures who are dull and boring and who lack organization during lecture time.

Absence of students can be seen as a very personal decision where it depends on both the ability of student to attend and the motivation of student to attend class. Under the interview conducted by Kottasz (2005), students tends to
not going to lectures because they think that lecture were not considered worth going as lectures were "boring", "a waste of time" and "unnecessary". Based on the correlation analysis, students who think that "I rarely enjoy the acquisition of knowledge for its own sake" strongly agreed that "lectures have poor content" and "the lecturer is poor". Students claimed to feel obliged to go to lecturers only because friends or peers attended as well and students admitted that they were only at university to get qualification for job in the future.

In Massingham and Herrington (2006) study, student mostly attends their lectures only if they perceive value (credit hours) in their attendance. The study shown that lectures attendance were affected by many reason including sickness, work, the lectures were boring, dislike towards lecturer, available of lecture notes. For attendance of lectures, sickness, busy, work, "the lectures were boring", "I can pass the subject without attending" have significant difference. Inappropriate student’s attitudes toward learning are not occur naturally and changeable. They have experienced a level of success in educational environments that does not support deep understanding and there is no desire for knowledge and understanding.

Students’ motivation such as a consistent effort that directly connected to students’ educational goals were required for students to coming to lecture. In Moore (2006) study, students belief that they would make a higher grade if they attend class regularly, that they should get credit for their attendance and they will take remedial actions after missing class by reading the textbook or obtaining the notes from classmates. Students also agreed that their attendance to class would be affected by whether they would receive academic credit for their attendance. On the other hand, students disagreed that it is not important to attend class in college as it is in high school and they could just learn as much as attend the class by studying every day.

In Fjortoft (2005) study, students tend to absent after or before an examination. Student claimed that after test, they would not able to focus in class due to late study. Students also tend to miss class because they claimed that lecturer teaching by reading the notes where they could do so by themselves without attending lecture. Students also claimed that the lectures are boring and they only attend lecture whenever the notes are not provided in class.

In Westrick et al. (2009) study, there were top reasons rated as main reasons for being absent to the management courses’ lectures included sickness, tired after
studied the night before lecture, work on assignment or studied for test in another course. Students also perceived that they did not learn much as they attended the management class. Moreover, students felt there was unnecessary to attend lecture as the course content in the management course was easy.

2.4 Factor analysis

In multiple behaviour research, researchers wish to represent the relationship between observed behavioural variables. Correlation can be used to show the relationship between the variable if there only a few observed variable. When there are many variables involve in the study, the interpretation of the pattern of correlations can be complicated. Factor analysis will be an appropriate method to study the pattern of association or correlation between variables empirically.

Factor analysis has been used in the study of student attendance in business schools by Mearman et al. (2014). Set of independent variables within question (from questionnaire used in study), been revealed into cluster components which may be useful in predicting attendance. From the study of Mearman et al. (2014), it can be concluded that the important factor that greatly increased the probability of increasing in attendance rate was students' attitude or achievement values. These included most of the extrinsic motivations such as student who was ambitious and wanted a better achievement at the end of their education, such as a good grade for their academic achievement or a good job in future.

In Yudko et al. (2008) study, factor analysis also been used to reduce the observed variable to latent variable. The analysis identified three factors, which then used in Anova analysis. The study suggested that students had a positive attitude toward learning through online and even obtaining their degree online. Most of the students believed that the ability of detailed lecture notes online was helpful to them but not influences their attendance to classroom lecture. Detailed online lecture notes helped students to understand the lecture well.

2.5 Sample size for factor analysis

In factor analysis, sample size is important when the communities level are not high (MacCallum et al., 2001). Comrey and Lee (1992) recommended that the adequancy of sample size for factor analysis: 100=poor, 200=fair, 300=good, 500=very good,
1,000 or more will be excellent. Tabachnick and Fidell (2007) suggested that at least 300 sample is needed for factor analysis.
REFERENCES


