

A Study of Some Factors Affecting Low Academic Performance in Operations Management Course at UiTM Raub Campus

Musramaini Mustapha, Siti Hasziani Ahmad
Faculty of Business Management
UiTM Pahang, Kampus Raub
27600, Jalan TRAS, Raub, Pahang.
musra_08@pahang.uitm.edu.my

Mohd Faizal Azrul Azwan Muhamed, Mohd Aidil
Riduan Awang Kader
Faculty of Business Management
UiTM Pahang, Kampus Jengka
26400, Bandar Jengka, Pahang

Abstract—Operations Management course is compulsory for students majoring in Business. According to final exam report, the failure rates for this course increase more than ten percent last year. It is a sign for researchers to conduct a study to identify and explain some determinant factors of low academic performance in Operations Management course. High failure rates could reflect the tertiary education and university image. Although it is below than quality measurement but it is clearly stated in the list as one of the highest failure rates course in Faculty of Business Management. Some of the determinant are students do not understand the question become the most unpleasant factor, followed by personal mistake such as careless in the middle of calculate the answer using calculator, student attitude such as absenteeism and take things for granted for instance do not remember the formula or leave it blank. Moreover, lack of student's foundation in mathematics because nature of this subject is more than sixty percent calculation based. All of these determinants become major factors in affecting low academic performance in Operations Management course and need to take alternative to provide solutions.

Keywords—students; low academic performance; factors

I. INTRODUCTION

It is the responsibility of all parties to maintain the excellence of a university in order to produce quality graduates and uphold university reputation. Low academic performance and high failure rate in any course might also jeopardize university's image. Operations Management is one of the compulsory courses taken by all Diploma students at the Faculty of Business Management and it is identified as one of the most difficult and challenging course at UiTM. This is due to the fact that it needs the students to review certain theories that they have learned from the previous related courses and to practice them in Operations Management. Furthermore, in this course, students must learn both theories and calculations from various fields of studies such as Finance, Economics and Business Mathematics and they required to have basic

computing knowledge and solid computing skill in order to excel in this course.

According to the final exam report, the failure rates for this course increase more than ten percent on 2015 compared to the previous year. Although it is lower than quality measurement but it is clearly stated in the list as one of the highest failure rates course in Faculty of Business Management. Therefore, this paper aims to investigate the factors affecting low academic performance in Operations Management course at UiTM Raub Campus. This is important to reduce the failure rate in this course and to improve students academic performance. In addition, it could provide on-going control mechanisms in teaching and learning process by providing a quality education that the university offers, and consequently will produce knowledgeable and skilled graduates which could enhance the university image.

II. LITERATURE REVIEW

A. Operations Management Self-Concept

Operations Management Self-Concept is the knowledge and deep understanding of theories, concepts and techniques in a subject. Therefore, this subject requires a deep understanding of the questions posed. Students must understand the questions and know how to use the appropriate technique or formula to answer the question.

The use of wrong technique or formula can affect the entire answer because most of the questions are related to each other and this situation will lead to getting lower scores due to students do not understand the questions and use the wrong technique or formula. A study by [1] found that one of the causes of the students' low performance in the Mathematics subject is due to the difficulty in detecting the suitable method to solve a particular problem.

This finding is also supported by a study of [2]. They found that the two main reasons that contribute to the highest anxiety among mathematics students are "I cannot decide what

operations I will use" and "I find most of the questions in Mathematics hard and I find it difficult to understand complex questions". Many studies also found that English proficiency also plays an important role in understanding the questions. They found that students might have difficulty to understand the concepts of Mathematics better due to the lack of English proficiency [3].

Furthermore, other researchers also found that the lack of proficiency in English language and communication has contributed to low academic performance in Project Management course [4].

B. Personal Mistakes

Operation Management course requires high accuracy of calculation because any minor carelessness in computing will give huge impact on the overall answer. This is due to the fact that majority of the answers are related to each other.

They found that the carelessness in computing Mathematics subject will lead to poor academic performance [1]. In addition, [2] found "I'm afraid of solving the questions in a wrong way" as one of the reasons of the highest anxiety among mathematics students. This indicates that the probability to do personal mistakes during calculation by each student is very high.

Students routinely regard mistakes as indicators of their own low ability which will lead to poor academic performance as stated by [5]. Personal mistakes happened in calculation subjects due to several reasons such as students did not memorize all the requisite facts and did not execute the steps of a process, or perhaps just ignored the directions as said by [6].

C. Students' Attitude

Students' attitudes also play an important role in determining students' performance. A study by [7] revealed that students with a high internal locus of control have positively correlated with academic performance.

This means students with a high locus of control will engage in behavior consistent with getting a good grade such as studying, attending class regularly, and keeping up with assignments.

A cross-sectional survey on factors affecting students' academic performance at a Turkish university had done by [8]. He found that there is a significant relationship between class attendance and students' achievement.

The factors that affect the poor performance of management students in the quantitative subjects; especially in Business Mathematics and Statistics as investigated by [9]. They revealed that poor attitude like attending classes without the study material, not revising the previous lectures, not paying attention during class, and absent the class regularly has contribute to poor academic performance.

Furthermore, students' attitude such as rarely working in small groups to solve Mathematics problem and regularly practicing Mathematics procedures only in classroom as

compared to making estimations or discovering more than one possible technique to solve Mathematics problem will contribute to low academic performance [1].

In addition, students' study habits and personal conditions such as studying only when there is a quiz or test, feeling sleepy in class, poor attendance and copying assignments of friends are the factors that can lead to poor academic performance as studied by [10].

D. Students' Foundation in Mathematics

Students' strong foundation in Mathematics is really important for Operation Management subject. This is due to the continuity of the questions which students need to answer correctly from the beginning.

The lack of students' foundation in Mathematics will lead to poor academic performance. Mathematics background has been found to be an important determinant of student performance throughout the Financial Accounting course as stated by [11]. The factors that affect the poor performance of management students in the quantitative subjects; especially in Business Mathematics and Statistics as investigate by [9].

They found that student enrolled in management discipline with non-mathematical background has contributes to poor academic performance. This finding is also congruent with the study by [1] who found that students who are weak in basic foundation of Mathematics and those who do not understand the basic concept of Calculus will lead to poor academic performance.

III. FACTORS AFFECTING LOW ACADEMIC PERFORMANCE IN OPERATIONS MANAGEMENT COURSE

A. Calculation Based Subject

Before the students answer the questions, indirectly request them to understand the information given in the question first. Somehow, via the test or quiz sample shown some of them do not really understand the question at all. Figure 1 shows not only technical part of calculation, for example, incorrect formula but also for basic one for instance calculated the time but answer given in unit.

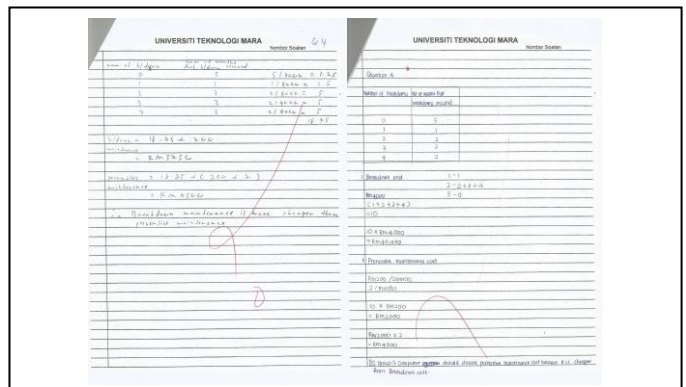


Fig. 1. Misunderstanding the question

B. Personal Mistakes

Some of the students seem to be careless while using calculator and as a result given the wrong answer for their exercise, quiz or test even though the formula and the way of answering it is correct, as shown in Figure 2. It might due to they are too rushed in the middle of calculation and as the result careless in justifying their answer.

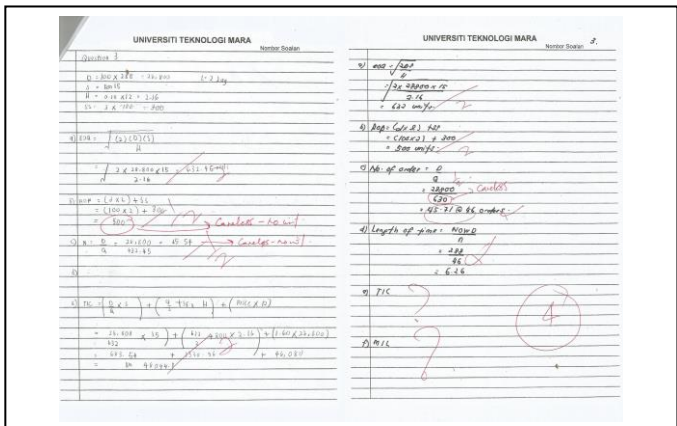


Fig. 2. Careless in calculation

C. Absenteesim and Take Thing for Granted

Based on the attendance record as shown in Figure 3, student that have the attitude problem and always miss out class usually did not perform in exercise, quiz and test. As a result, the student got low assessment marks and also low final exam mark, as shown in Figure 4. Not only are those, some of them most likely used to leave and submit blank paper. It is considering irresponsible action that leads to bad decision. No efforts given to get marks or strive for their own future.



Fig. 3. Attitude problem

Bil	No Pelajar	Part	TEST (20%)				QUIZ (10%)				ACADEMIC VISIT (10%)	20%	TOTAL (40%)
			1 (100)	2 (100)	20%	1 (24)	2 (16)	3 (24)	4 (24)				
1	2013177967	5	50.50	43.50	9.40	23.50	12.00	14.00	18.50	9	16.71	26.11	
2	2013587255	5	51.00	35.00	8.60	19.00	12.50	15.50	15.00	9	16.11	24.71	
3	2013779949	5	34.00	20.00	5.40	18.00	14.00	8.00	11.00	9	15.04	20.44	
4	2013777571	5	57.50	40.00	9.75	8.50	4.50	3.00	13.00	9	12.26	22.01	
5	2013101843	5	63.50	50.00	11.35	21.00	14.50	16.00	11.50	9.5	16.82	28.17	
6	2013794683	5	56.00	28.00	8.40	19.50	10.50	16.50	14.00	9.5	16.35	24.75	
7	2013993483	5	38.50	50.00	8.85	6.00	5.00	12.50	18.50	9	13.64	22.49	
8	2013390683	5	68.50	41.50	11.00	22.00	12.00	16.50	15.00	9	16.45	27.45	
9	2013785493	5	42.50	22.50	6.50	0.00	13.50	8.50	0.00	9	11.99	18.49	

Fig 4

D. Student's Foundation in Mathematics

It is because nature of the Operations Management course is more than sixty percent calculation based. It might due to the students personal interest who dislike calculate course and weak of foundation in mathematics. This factor stated by students who always not been able to score in this course.

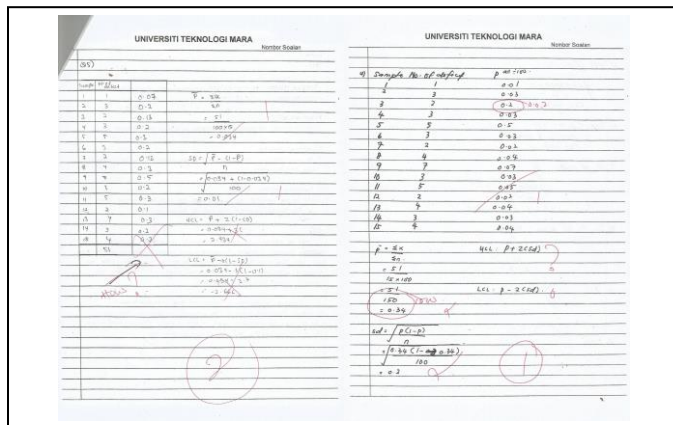


Fig. 5. Weak foundation in mathematics

IV. CONCLUSION

As a conclusion, according to the above example, it shows that the factors that contribute to the failure for this subject is personal mistakes, students do not understand the questions, lack in basic calculation and absenteeism. Personal mistakes basically related to the careless in calculation, as mention by [1] the carelessness in computing in Mathematics subject will lead to poor academic performance. Furthermore, according to the example given, students have difficulties in understanding the questions as a result they cannot answer the question correctly. This statement can be supported by Tang [1] that the causes of the students'

Low performance in the Mathematics subject is due to the difficulty in detecting the suitable method to solve a particular problem. A part from those students who always absent from class will give bad impact to their academic performance. According to the study done by [1] on factors affecting students' academic performance at a Turkish university, he found that there is a significant relationship between class attendance and students' achievement. As a result from previous study, the students who were absent from class, will not be able to perform well in their study.

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