The Prevalence of Low Performing Students at the School of Mathematical Sciences

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Abstract

Unsatisfactory results among students at the School of Mathematical Sciences has become quite a phenomenon. This study aims to identify the problem that resulted in an unsatisfactory examination results, which caused the students to achieve low gred point average (GPA) and cumulative gred point average (CGPA) during Semester 1, Session 2009 – 2010. In order to identify the problems, a survey was conducted and 18 students responded in the study. Factors that were studied are students' learning techniques, attitude, social interaction, interest dan motivation, spiritual aspect and self-confidence. The result of this study showed that most of the students felt they had tried their best to achieve good grades, they are concerned with their study and they were interested in the courses taken. However, this group of students also admitted that they did not study consistently, preferred to study alone, and sometimes easily gave up and felt that they were helpless and could not change the situation.

1. Introduction

The prevalence of unsatisfactory students' performance has frequently been a major concern to lecturers who always expect their students to excel and achieve good results. This issue has been studied by various researchers to better understand the cause and factors that affect students' academic performances. The Student Development Committee (JPP) of School of Mathematical Sciences (PPSM) took the initiative to do a small study to investigate the characteristics of these low performing students and also the underlying factors of their poor academic performances. These students were identified from the examinations results in Semester 1, Session 2009/2010. The students with a low GPA and CGPA of 2.00 and below were selected and were given questionnaires to complete. Many factors that relates to low achievement among students are studied. Among the factors studied are students' learning technique, learning attitude, social interaction, interest and motivation, spiritual aspect and self-confidence. Based on the outcomes of this study, the Student Development Committee (JPP) planned to implement a continuous improvement programme to help the students improve their academic performance.

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The phenomenon of poor academic performance among students in universities has been the concern of many parties especially academicians. There have been a number of studies on students' performance in universities (Ervina & Md Nor 2005; Siti Khadijah 2003; Noor Azina 2009). Ervina and Md Noor (2005) who studied Accounting students' performances in Universiti Malaya, found that the performance of pre-graduate students from the Business and Accounting Programme had a close relationship with their academic achievement before they enrolled into the university, particularly in Mathematics subject in SPM and Economics in STPM. Their study found that a good performance in Mathematics and Economics would help the student's understanding at tertiary level. Meanwhile, Siti Khadijah (2003) studied on UiTM students in Shah Alam to identify whether gender factor influences students' achievement. The study found that female student's performance was better than that of male students. Further study by Noor Azina (2009) who studied on Form 2 students' achievement in Mathematics using the data obtained from the Trends in International Mathematics and Science Study or TIMMS (2003) in a study to identify Grade-8 (similar to Form 2 in Malaysia) students' performance in Mathematics and Science involving 46 countries. Malaysia falls at 10th place while Singapore was first. Using the TIMSS data for Malaysia, she studied the importance of students' background, learning resources, and attitude towards Mathematics learning and its results. The study found that sufficient learning resources at home such as books, regular use of computers, and non-Malay ethnicity resulted in higher Mathematics results among Malaysian students. Based on the past literature, a survey has been developed for this study.

2. Methodology

A survey was developed and questionnaires were administered on 11-15 January, 2010 to all 18 students who achieved a low GPA and CGPA of 2.0 and below. The purpose of the study is to investigate the characteristics of low performing students and to find the root cause of their low achievements. Below are factors that had been identified as affecting the students' performance and are specifically asked in the questionnaires.

    (a) Learning technique
    (b) Students' attitude
    (c) Socializing, interest and motivation
    (d) Spiritual aspect
    (e) Self confidence

Apart from these factors, the students' needs for training or any skills needed were also solicited.

3. Results and Discussions

3.1 Profile of Respondents

A questionnaire of 18 items was answered by these students. Most of them are students from Mathematics (14 respondents), Statistics (3 respondents) and one student from Mathematical Education programmes (refer to Figure 1). Most students (66.7% or 12 respondents) are from rural areas and the others are from urban areas (33.3% or 6 respondents). Nearly all parents of these students are still married and live together. Only one student has parents who were separated and another one whom mother had demised. Half of the students come fom a family with one source of income, in which majority of the mothers are housewives (10 respondents) and 33% of them having working parents (6 respondents), while two respondents did not respond to the quesation.