

RECENT FINDINGS PERTAINING TO FACTORS CONTRIBUTING TO THE POOR ACADEMIC PERFORMANCE OF UNDERGRADUATE STUDENTS IN THE DEPARTMENT OF ELECTRICAL ENGINEERING, UNIVERSITY OF MALAYA, KUALA LUMPUR, MALAYSIA

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ABSTRACT

This paper discusses the factors contributing to the poor academic performance of undergraduate students at the Department of Electrical Engineering, in the Faculty of Engineering, University of Malaya. Amongst the factors found are social issues, poor self discipline, language problems, financial constraint and adjustment issues into university life. The Department has taken steps in its effort to overcome these problems. Part of these initiatives was the formation of a committee to oversee the situation of the poor performing students, and efforts have been stepped up to monitor and guide these students.

Keywords: *electrical engineering students, poor academic performance, remedial steps to overcome poor academic performance*

INTRODUCTION

The Department of Electrical Engineering, in the Faculty of Engineering, University of Malaya currently runs three undergraduates programmes, namely Electrical Engineering, Telecommunications and Computer Engineering. The Department has a total student population of 600. In general, students who perform poorly account for 5% of the total student population. Poor performance in this case is defined as those failing to exceed the 2.0 Grade Point Average (GPA) limit.

Recently, the Department took a novel step in its effort to understand the major causes of poor academic performance among its students. A student counselor was engaged to address the weak students over a period of one semester. Thirty students from different levels of their studies and from the three courses offered were identified to be under the category of poor performers. However, half of them responded and had formal meetings with the counselor. A report was submitted, which amongst others discussed the main issues faced by these students. The report highlighted the following:-

- 1) Social background of students contribute to a percentage of poor performance students,
- 2) Poor time management and lack of proper study methods,
- 3) Adapting into university life,
- 4) Social issues and attitude problems.

The faculty and also the department have assigned a committee to oversee the situation of the poor performing students and efforts have been stepped up to monitor and guide these students.

THE DEPARTMENT OF ELECTRICAL ENGINEERING, UNIVERSITY OF MALAYA

The Department of Electrical Engineering was established in 1959, is the largest department in the Faculty of Engineering, University of Malaya. There are approximately 600 undergraduate students and a team of about 28 teaching staff in the department. All the courses offered take 4 years to complete before a degree is awarded to the students. For this study, the student's intake for the 2007/2008 session for the three programmes is shown in Figure 1.

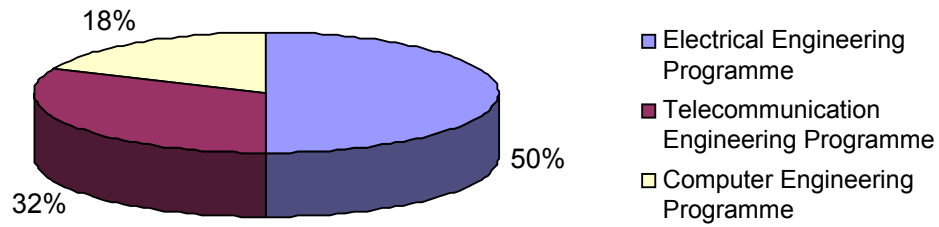


Figure 1 Student distribution/intake according to engineering programme offered for the 2008/2009 session

From the 2007/2008 session student's intake, 10.8% of the total student population is made up of foreign students.

On average, the percentage of students whose results fall below Grade Point Average (GPA) of 2 is about 5% of the total student population. These students are considered to be under the observation of the department.

FACTORS PERTAINING TO POOR ACADEMIC PERFORMANCE

The department has appointed a student counselor to study and monitor these under observation students. In this exercise, thirty students were identified to be under observation; half responded and came forward to see the counselor. Five out of these students are foreigners. One from Turkey, one from China and three from the Middle East, the rest of the students are Malaysians [2].

The initial observation by the counselor is that most of them had very low self esteem, low self confidence, lack of self discipline; but they were however highly motivated to improve their academic performance.

On average, 4.2% of the students in the Department fall under the observation category. Figure 2 shows the percentage of poor performing students in the three different disciplines offered by the Department of Electrical Engineering.

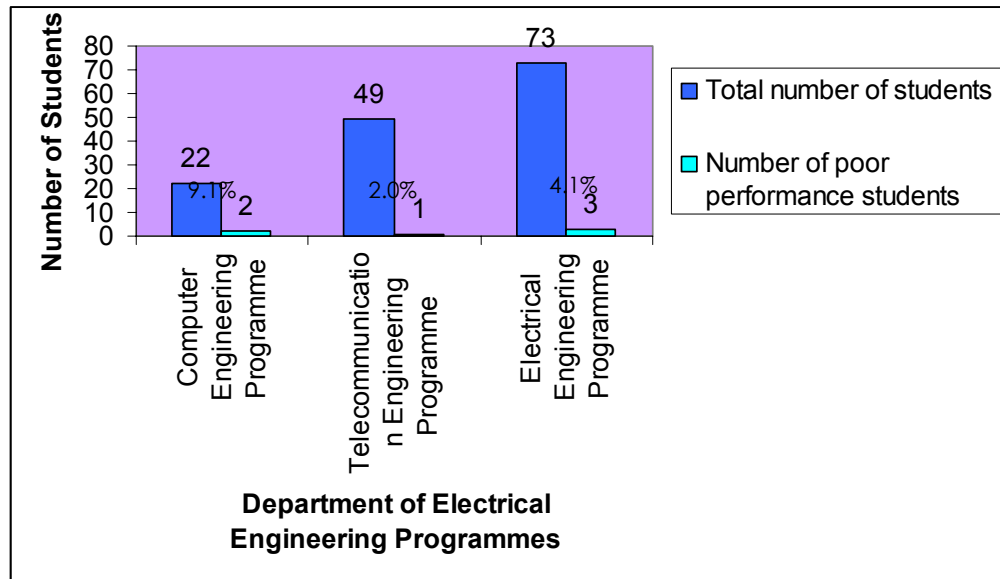


Figure 2: Percentage of poor performance to the total number of students.

From the semester 1 examination results, percentage of poor performance students is shown in Figure 3, where 21% is made of foreign students and the rest are Malaysians.

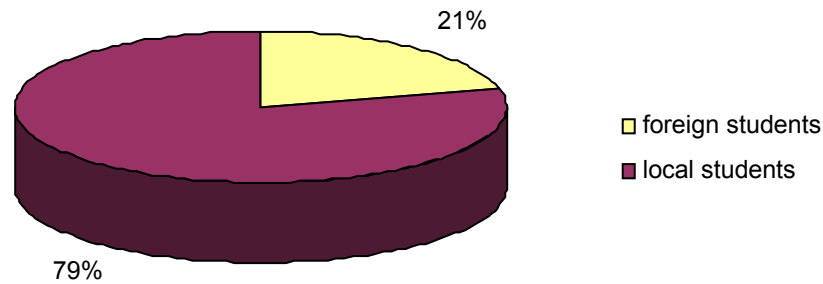


Figure 3: Percentage of poor performance students for Semester 1 (2007/2008)

Figure 4 shows the percentage of poor performance students for the semester 2 examination results. There is an increase in the percentage of foreign students who are poor performers as some of them were registered in the second semester intake.

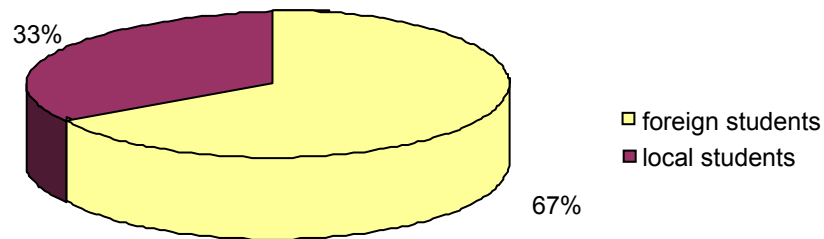


Figure 4: Percentage of poor performance students for Semester 2 (2007/2008)

The authors had concluded a few main factors pertaining to poor academic performance of our students as shown in Figure 5.

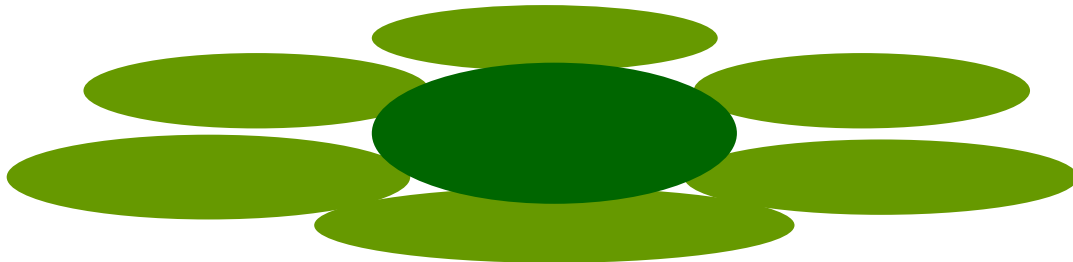


Figure 5: Factors pertaining to poor academic performance

The main problems encountered by the students are as follows:-

- *Language Problem*
A third of the students under observation are overseas students who are not proficient in the English language. As the classes are conducted in English, they find it difficult to understand the subject matter. English is not the mother tongue of Malaysian lecturers and there is a strong possibility of a communication breakdown between these students and the academic staff at the department.
Another factor to consider is that most local students who are under the observation category are those from the rural areas, where English is not widely spoken. They may feel they lack the skill in communicating in English and they feel inferior to their urban counterparts in terms of confidence and social skills.
- *Study Time-Mismanagement*
The students find difficulty in understanding the courses because of poor time management skill. They lack the discipline to fully attend the lectures and they spend less time in revising and self-studying. The majority of these students are lacking in mathematical fundamentals. As they progress through the semester, these unaddressed problems become aggravated.
- *Financial Constraint*
Some students under observation are compelled to work on a part time basis to supplement their income. This is common in foreign students who need to self finance and continue with their studies at the same time. It is their studies that suffer since the part time job can be demanding and taxing. Their part-time job is usually at night which contributes to their absence in their early morning lectures.
- *Adjustment Issues to University Life*
For most of the students under observations in the first year, their main problem is adjusting to university life. There is a vast change from secondary and foundation/matriculation-level education to that of the university's. The concept of self-directed learning in the university is daunting as compared to being 'spoon-fed' before. Apart from the demand of academic work, these students have to be active in their residential colleges to ensure that their stay in the college is secured. They have to be involved in election campaigns, inter-religious functions, cultural shows and other activities, which can undermine their prioritization.
This problem is more profound amongst the foreign students, as they have to adjust with living in a new environment and culture.
- *Social Issues*
There is a lack in social interaction between academic staff and students; even amongst students there is less mixing between foreign, urban and rural students. This can be a factor especially when students have to work together in group assignments and laboratory work.
- *Aptitude (Ability) and Personality Clash*
Some of the students have the aptitude for Electrical Engineering but their personality and interests are totally different from Electrical Engineering. One student was good in Electrical Engineering from his assessment but seemed to be interested in the performing arts and drama. There are cases when students have to follow their parents' wishes of wanting them to be electrical engineers when in reality they just want to choose a different career path. There is a conflict of interest that may cause disharmony and unhappiness in the student's wellbeing that contribute to their poor academic performance.
- *Motivation Problem and Method of Study Issues*
Most of the students have problems in their methods of studying. Some read the text without understanding, and could not find an efficient study method. They also find difficulty in getting friends to form study groups. Besides that, they have other more enjoyable hobbies and activities that keep them distracted from their main objective.

The abovementioned factors are rather significant as compared to other issues related to personal matters like family problems and other individual and personal issues faced by the students.

EFFORTS TO OVERCOME THE ISSUES OF POOR PERFORMANCE

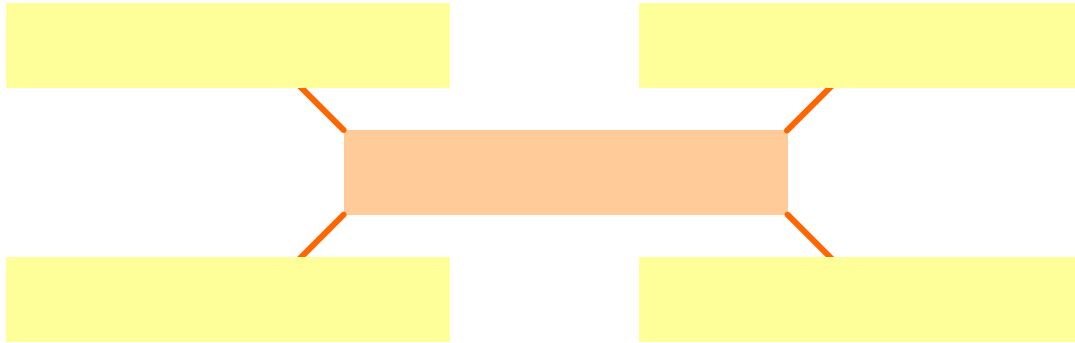


Figure 6: Efforts to overcome the issues of poor performance students

Appointment of academic advisors

The Department has stepped up its efforts to address the problems of poor academic performance students. It has appointed specific lecturers to a group of students as their academic advisors. The arrangement is such that a lecturer is in charge of about 10 students per year. This approach is effective if the students and the advisors have formed an academic rapport such that the advisor can closely monitor the individual student. This method fails when the students feels it is such a burden to constantly report to the advisor and the lecturer does not feel that many of the students do not need monitoring.

Efforts to overcome
perform

The Faculty of Engineering has also formed a faculty-level committee to address this issue. Each of these students is closely monitored in terms of their semester results and if their results continuously fall below GPA of 2.0, they will be interviewed and the cause of their poor performance will be investigated and a solution will be forwarded.

Extra classes and tutorials are arranged for difficult courses like electronics, to accommodate the poor performance students. The students are given the feedback of their continuous assessment results to keep them informed of their performance.

Extra classes and tutorials for difficult courses

Studies have shown that students with poor academic performance are those who are too dependent on others and always have a negative outlook [3]. However, it should be recognized that weak students may possess academic potential and the ability to study and perform, but their own negative attitudes may hinder their progress to success [1]. With that in mind, the department is making a concerted effort to motivate and help such students.

CONCLUSIONS

This paper has discussed in detail the factors that may contribute to the poor academic performance of students in the Electrical Engineering Department, Faculty of Engineering, University of Malaya. It has also outlined various efforts that have been taken to overcome this problem amongst the students.

As mentioned earlier, the department had engaged in a part-time counselor to monitor and guide the poor performance students. It is unfortunate that only 50% of the identified students responded. In reality, the Department can only do so much to help the students. In the end it is up to the students themselves to take heed and improve themselves.

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