

# Profession Preference by Engineering Students After the Graduation

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## ABSTRACT

This paper is discussed about engineering students preferred field of profession after graduation. It will answer the question of what is the most profession preference among graduating students, what makes them to choose that field, and does it has to do with their previous industrial training experience. These are the questions, that when answered, will paint a better picture of what the final year students nowadays view of the current job market, and may also could provide insight into the employment patterns in future. This issue is important as there are increasing concern due to the imbalances trend between the number of graduated students and the job availability. This paper provides the visualization of the field of profession that is most popular among students, and to show future projections of available job market for next graduate engineering students so that they will have a better view and opportunity for employment.

**Keywords:** *Field of Profession, Job Market, Graduate Engineering Students, Employment Patterns, Opportunity for Employment*

## 1. INTRODUCTION

Profession is an occupation that requires specialized educational training or skill, with the purpose of delivering disinterested objective counsel and service to others, for a direct and definite compensation, exclusively distant from expectation of other business gain [1]. While, field is often used to indicate a specific occupational area or academic branch and not referring to a particular job. Some examples of field of profession may include, civil engineering, electrical engineering, mechanical engineering, and etc. One common thing faced by final-year students are they had to make a decision on what profession or field do they want to pursue after graduating with their level of qualification. Seeing Malaysia's Unemployment Rate is increased to 3.40 % in March 2019, it has been more important for graduated students to plan properly and strategize on the next step they need to take [2]. Most of the students are choosing the career that can reflect on their vocational interests and skills owned [3-4]. To make graduated students prepare for their job hunting in the near future, study on the job market

trend and also study current most preferred field of profession among graduate students is needed.

There are quite a lot of paper that discussed about the factors that lead to the career choice among the graduate students such as higher monthly income and social status [5], ability to self-employed [6], artistic nature of the career [6-7] and demographic characteristics of population which can influence the motivation and career growth of the graduate students [8-10].

This paper was prepared to investigate the preferred field of profession among graduate engineering students, and will focus on three specific research questions:

- i. What are the most preferred field of professions among graduate students?
- ii. What influences the graduate engineering students' choice?
- iii. Is there any correlation between Industrial training and the preferred profession?

## 2. METHODOLOGY

Firstly, the objectives are discussed and determined for this research. After several discussions, the objectives chosen are as the following:

- i. To learn the most preferred field of profession among graduating students
- ii. To study what influences the students' decision
- iii. To understand the correlation between industrial training and the preferred profession
- iv. To understand what students expects from their first job

These objectives are made as a guide to construct questions on Google Form. The form is divided into six sections where each section contains questions that related to a specific information. The first section is to acquire the categorical data such as gender, course and the year of study of the respondent. Second and third section focused on the first and second objective respectively. In the second section, respondents will state their preference of profession and the influence on their decision is determined in the third section. Section four is based on the third objective, where the questions are related to the respondents industrial training. Finally, the questions related to the fourth objective is constructed in section five and six.

This form is then delivered to 28 sample students and the respondents are mostly consist on final year students because they are more related to the questions. After the targeted number of respondents is achieved, the data is exported into a Microsoft Excel document where the data is illustrated in the form of pie chart and bar graph. The acquired data is then being analyzed to observe how each data is related.

## 3. RESULTS AND FINDINGS

Based on the survey, the response received from respondents is analyzed. A total of 28 respondents were selected for the study. All the respondents are focused on the engineering students. Data collected from the questionnaire were analyzed and the results are presented in a graphical form. A common disagreement appeared among students over the preferred field of profession after graduating. Fig 3.1 shows the choice of preferred profession of students after graduating. According to the data, most students choose to proceed their career to what they have studied before which is engineering. Only 35.71% of engineering students choose to proceed their career to

others field that did not related to their studies. The second choice of preferred field is education with 25%. Engineering students may have intention not to work in the engineering industries but, they willing to teach what they had learned during their studies. The lowest percentage is seen in arts with 3.57%. Very few students tend to choose arts as their career as it is a platform that needs to have high in creativity and skills.

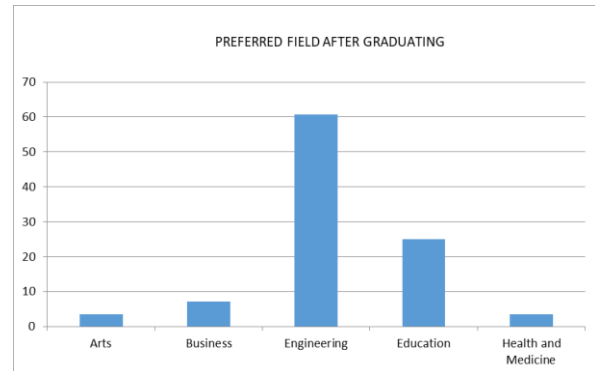


Figure 3.1: Preferred Field after Graduation

Figure 3.2 indicates the reasons why they pursue the interested careers. Engineering students find that they totally agree that the reasons why they choose engineering are because of high pay job which 12 of 28 votes the reason. Other criteria that students agree to choose engineering career are because of they had developed skills, knowledge and confidence which they can used to do their job. Besides that, engineering students put more interest and passionate to pursue their career in this path.

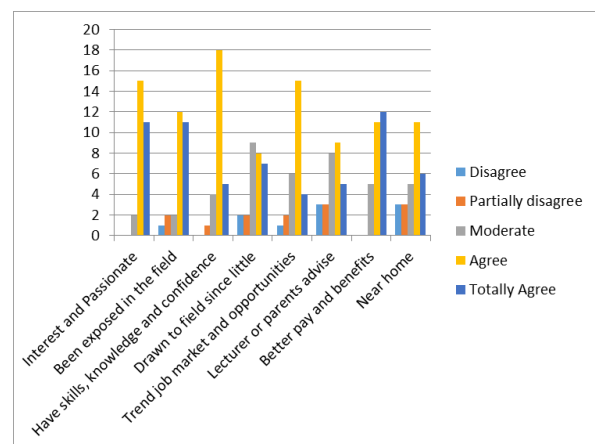


Figure 3.2: Reasons students choose their preferred career

Figure 3.3 shows the expectation of fresh graduate in their first jobs. Most students worry that the environments of their office is not suitable for them.

So, most of them preferred to have a friendly staff which can guide them to learn something that they might not know as it is their first job. The feelings of being far from home for years during studies also made the students to choose their first job near home and to be near with their parents. High pay job and job related to studies also the main reasons of fresh graduate in choosing of their first jobs.

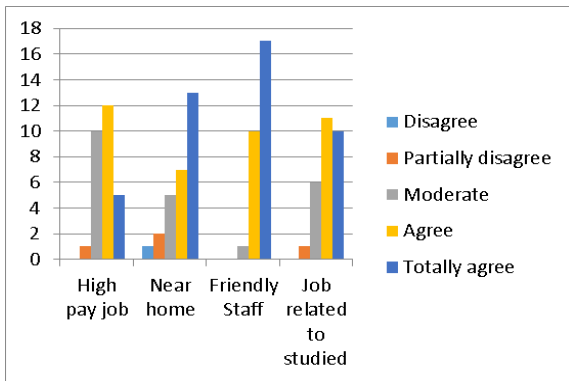


Figure 3.3: Expectation of students in their first job

Figure 3.4 and 3.5 shows the number of sessions on job interview that need to have before securing a job and the preferred duration of break before secure a job.

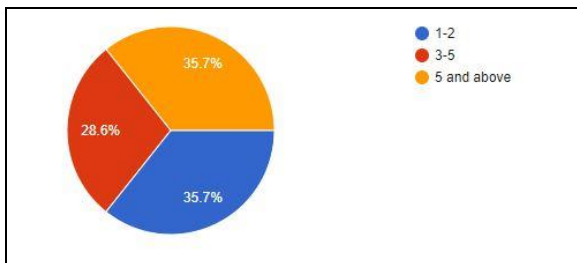


Figure 3.4: Job interview to have before secure a job

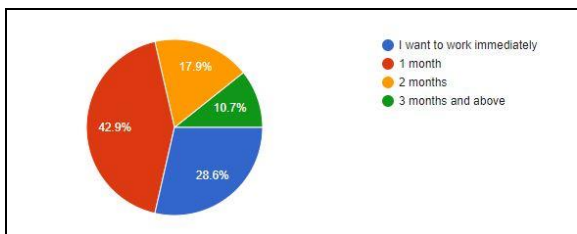


Figure 3.5: Preferred duration break after studies before getting a job

Figure 3.6 shows that most of students choose the companies based on the companies they want to be accepted as a permanent worker. The percentage to secure a job at industrial training companies is 78.6%

while 2.4% are students wanted to find other companies.

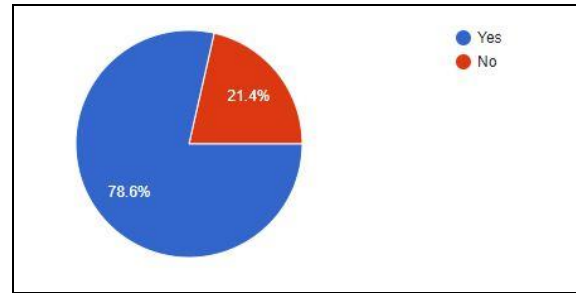


Figure 3.6: Interest in the field of industrial training

The data collected were analysed by using the Google Form’s format. There are a few departments of engineering students answered the questionnaire which are from Computer Science Engineering, Electronic Engineering, Electrical Engineering and Electrical Power Engineering. Most of them are from Faculty of Electrical and Electronic. They were now in their final year for their own courses.

The collected data had clearly stated that the most preferred field of profession among graduate engineering students is Engineering. These results are already expected as most of students have already set their ambitions or field of studies before they pursue their studies in university. Some of them chose engineering course because of influence from close friends or family but only time had decided for them to continue their career in engineering field. The next most preferred field of profession among graduate students is Educational. These group of students are most likely will continue their studies or already pursuing the Master or PhD level and will entering the educational line due to bonding with the university side or interest. The backup plan for everyone would be into business field of work.

There are many influences that listed for the respondent to select and rate and most of them votes for number four and five which are the highest value and most likely. They are influenced by their own passion and interest of the field. The exposure that had been received along their studies are also could influenced the selection. Some of the respondent are not really sure on the confidence and skills to pursue on the careers of selected field but most important thing is high in self-confidence. The exposure from their parents or closed family members could also be the reason that influence them on selecting their future. The trend of the market or market acceptableness of the field of work are important for them in choosing their careers. The amount of wages or benefits received also important for nowadays and

one of the things that will be looked closely by the respondent before deciding to continue in which field of work. Finally, the location of the work place also important and be a big influence to the respondent.

From the collected data, most of the respondent already started their working experienced in the Engineering field and most of them are interested by their industrial training experience and would continue working at that field of careers. Unfortunately, most of them could not secure any jobs yet but still eagerly searching and applying for job opportunity in the preferred companies.

Due to lack of experience, some students are advised to not expect too much on their first job but could grab the opportunities to gain more experience. First and most importantly, graduate students are expecting a high salary parallel to what they had go through along the learning journey. The location of the workplace also need to be near to the house as most of them are still living with their own parents and could save money for renting. Next, they are expecting a friendly staff and co-workers for having a healthy working environment. Lastly, what they have studied for many years should be used and not wasted from what they had learned during working process.

As a conclusion, there is a trend that engineering students are prefer to choose the same field of work as their studies rather than changing into different field. The influences they got from their parents or closed family and friends could be the main reason in choosing their future. They also expecting to have a stable financial and received a good pay due to economical reason nowadays.

## 5. CONCLUSION

There are advantages and disadvantages in every field of profession, so this is all depending on every people needs. From the collected data, it can be concluded that the trend of engineering students is preferring to choose the same field of work as their studies rather than changing into different field. They also expecting to have a stable financial and received a good pay due to economical reason nowadays. In a nutshell, we have learned that the most preferred field of profession among students is in an Engineering field. We also have studied the influences of the students' decision. Besides, they also expecting to have a stable financial and received a good pay due to economical reason nowadays which means our third objective to understand what students are expecting from their first job is achieved. Lastly, we also can see the correlation

between industrial training and the preferred profession showed that most of the students are both in the same field.

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