

**COMPANY PERCEPTION ON THE EMPLOYABILITY SKILLS OF
INDUSTRIAL TRAINING STUDENTS**

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Company Perception on the Employability Skills of Industrial Training Students

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Abstract

Employability is the main concern for students and universities. It is one of the objectives of Ministry of Higher Education (MOHE) as to produce skilled, experienced and knowledgeable graduates to fulfill manpower needs with 75% of the graduates employed in their relevant fields within six months upon graduation. This study was conducted to review the company perception on the employability skills possess by Mechanical Engineering students in Universiti Teknikal Malaysia Melaka who has undergone their industrial training program in respective company. Five elements of employment skills studied here are based on the generic student attributes (GSA) established by MOHE i.e. communication skills, teamwork skills, critical thinking, work attitude and long life learning. It used to ensure the students will enrich themselves as a competent and comprehensive student after graduated. Questionnaire was prepared in three phases. Phase 1 and 2 are about the adaptability of students to their working environment and how the knowledge and experience in classroom being integrating into real life work experiences. Phase 3 is about the professionalism and work ethics among industrial training students. The result shows that most of the industrial supervisors agreed that industrial training program is one of the vital contributors to the employability skills.

Keywords: Company perception, Employability, GSA, Industrial training

1. INTRODUCTION

Every year, about 150,000 graduate of local higher education institutions that include 80,000 graduates from public institutions of higher learning (IPTA) and the remaining 70,000 graduates from private higher education institutions (IPTS). Based on the huge number of graduates who are graduating each year, certainly the issue of employability among graduates is a major concern and should be considered. Some employers in Malaysia agreed that the technical graduates have good technical skills, but not a motivation, interpersonal, critical thinking, problem solving and entrepreneurship skills [1]. Besides that, more than half graduates from technical field that have a technical skills but still unemployed due to the lacking of employability skills [2]. Several short courses should be conducted in order to develop those skills needed. This situation not only happened in Malaysia. In America, the employers also not satisfied with the job applicants from technical graduates. It occurred not because they do not have enough technical skills or knowledge, but because they have not enough non-technical skills [3].

The Ministry of Higher Education (MOHE) has aggressively embarked on a mission to take in students with soft skills development program in order to produce high quality human capital, knowledgeable, competitive, has the creative and innovative features and move in line with industry requirements and social needs of the country. Soft skills such as human relations skills, communication skills, ethical behavior skills and cognitive skills are the attributes that being considered by employers when reviewing job applicants [4].

Practical training has been viewed as an imperative method of providing possible career choices for students. It provides the students with a first look at the realistic working environment and also is the place for them to obtain hands on knowledge and skills necessary in the industry of their choice. The industrial training program in Faculty of Mechanical Engineering, Universiti Teknikal Malaysia Melaka (UTeM) is carried out in duration of 20 weeks and compulsory for Mechanical Engineering bachelor degree program as required by the Board of Engineers Malaysia through Malaysia Engineering Accreditation [5].

A survey undertaken in 2010 covering final year Mechanical Engineering who have successfully completed their Industrial Training program was taken to evaluate the company perception on the five elements of employment skills that based on the generic student attributes (GSA) established by MOHE i.e. communication skills, teamwork skills, critical thinking, work attitude and long life learning. Evaluation on the performance output generally categorized on the generic skills, give an indication on

the feedback and perception on industrial training by the host organizations and students.

2. METHODOLOGY

This study used a descriptive research design with quantitative approach. Its aim is to identify the company perception on employability skills of industrial training student. The questionnaire is distributed to all employers who have mechanical engineering students from UTeM who undergo industrial training in their company in the year of 2010/2011. The questionnaire consists of three phases. The first phase is about the adaptability of students to their working environment. It will ask about the trainee's punctuality, appearance, obedient to company's rule and regulations and the task accomplishment. The second phase is on how the knowledge and experience in classroom being integrating into real life work experiences. It involved problem analyzing and solving, self-learning, information management and also verbal and written communication. Whereas, the professionalism and work ethics among industrial training students were discussed in the third phase. It was about the time management, attitude, idea contribution and commitment in work.

Table 1 Items in Generic Student Attributes (GSA) Elements

Communication skills	<ul style="list-style-type: none"> - Verbal communication - Written communication
Critical thinking	<ul style="list-style-type: none"> - Problem identifying - Problem analyzing - Problem solving
Long life learning	<ul style="list-style-type: none"> - Assignment - Self-learning - Information management - Task achievement
Moral ethics	<ul style="list-style-type: none"> - Punctuality - Appearance - Company profile - Safety procedure - Time management - Attitude - Awareness
Teamwork skills	<ul style="list-style-type: none"> - Idea contribution - Work commitment - Self involvement

As shown in Table 1, all the items in the questionnaire answered by the employers will be grouped according to the five elements of generic student attributes (GSA) established by MOHE i.e. communication skills (CS), teamwork skills (TS), critical thinking (CT), moral ethics (ME) and long life learning (LLL).

3. RESULT AND DISCUSSION

At the end of the survey, 241 employers were responding to the questionnaires. The distribution of gender correspond to the courses taken by the trainees is shown in Fig. 1.

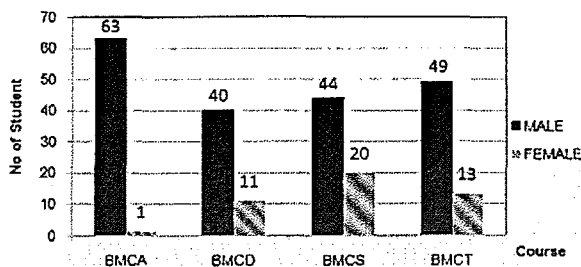


Fig. 1 Trainees' by Courses and Gender

19% or 45 people of the employers are having female students and 81% having male students as their trainees. 27% of the total trainees registered for BMCA and BMCS courses respectively whereas 26% of them are BMCT course and another 21% are BMCD students.

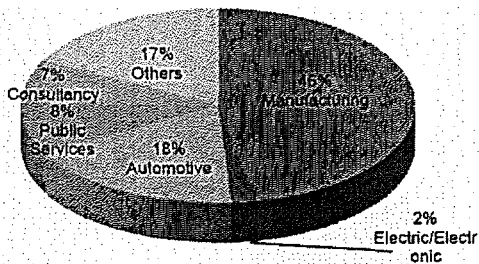


Fig. 2 Trainees' Percentage by Company Type

The trainees were placed in different types of industry. The percentage of trainees based on company types is shown in Fig. 2. Almost 50% of the trainees were placed in manufacturing company whereas 18% of them being located in automotive company. 8%, 7% and 2% of the trainees have undergone their industrial training in public services such as Jabatan Kerja Raya (JKR), consultancy company and electronics company respectively.

The analysis part begins with reliability analysis to check whether the selected items are reliable to the element in GSA being discussed. Cronbach's alpha which is based on the average correlation within items was used in this study. The value of Cronbach's alpha of 0.70 or higher is considered as acceptable and the items studied in each element are correlated to another [7]-[9].

Table 2 Reliability Analysis

Element	Cronbach's Alpha
Communication skills	0.836
Critical thinking	0.892
Life long learning	0.842
Moral ethics	0.884
Teamwork skills	0.826

By examining Cronbach's alpha in Table 2, the Cronbach's alpha for items belong to communication skills, critical thinking, life long learning, moral ethics and teamwork skills element is 0.836, 0.892, 0.842, 0.884 and 0.826 respectively. The value of Cronbach's alpha are considered high and suggesting that the items have relatively high internal consistency. Therefore, the selected items are reliable to be used throughout this research.

Table 3 Mean for Item in GSA Element

Item in GSA Element	Mean	Standard deviation
Communication skills		
Verbal communication	4.28	0.69
Written communication	4.21	0.72
Critical thinking		
Problem identifying	4.10	0.69
Problem analyzing	3.97	0.74
Problem solving	3.97	0.77
Long life learning		
Assignment	4.40	0.58
Self-learning	4.32	0.74
Information management	4.20	0.71
Task achievement	4.25	0.66
Moral ethics		
Punctuality	4.47	0.65
Appearance	4.34	0.64
Company profile	4.29	0.65
Safety procedure	4.41	0.70
Time management	4.27	0.70
Attitude	4.51	0.61
Awareness	4.23	0.69
Teamwork skills		
Idea contribution	3.98	0.79
Work commitment	4.46	0.66
Self involvement	4.21	0.79

Based on Table 3, it shows that all of the employers have a very good impression on the each element in employability skills possess by trainees who undergo the industrial training in their company. Generally, one may notice that almost majority of the employers rated their trainees between a scale of 3 to 5. The trainees give a good example in their attitude,

punctuality and work commitment with the highest mean score 4.47, 4.46 and 4.37 respectively. Out of 19 items being evaluated here, only 3 items have a mean score less than 4 i.e. problem analyzing, problem solving and idea contribution with 3.97, 3.97 and 3.98 respectively.

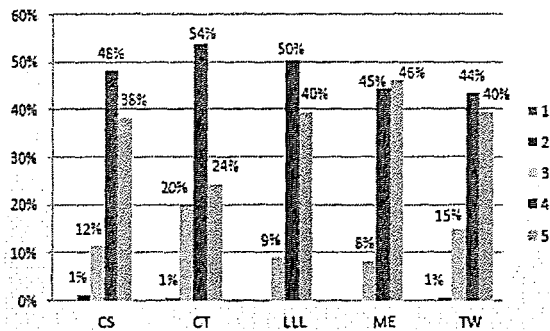


Fig 3 Employers' Rating by GSA

Fig 3 shows the rating for GSA in general given by employers. Generally, all employers rated 4 and 5 to their trainees with at least by 24 percent (rate 5 for critical thinking) and at most 54 percent (rate 4 for critical thinking). By looking at this figure, it can be noticed that trainees gave such an excellent impression to their employers except for isolated cases that rate 1 percent to communication skills and critical thinking. The faculty may suggest some actions to improve in both isolated cases.

Table 4 Mean for GSA Element

Item in GSA Element	Mean	Standard Deviation
Communication skills	4.24	0.70
Critical thinking	4.01	0.73
Long life learning	4.29	0.67
Moral ethics	4.40	0.66
Teamwork skills	4.21	0.75

Table 4 displays the mean score for the overall GSA elements. The employer believed that their trainees have a very good moral ethics element in themselves as the overall mean shows the highest score. Besides that, long life learning, communication skills and teamwork skills have such similar mean score shows that trainees have indeed gave an excellent performance throughout the industrial training programs. But for critical thinking, trainees have been rated by 4.01 which is the lowest value in the GSA evaluation. This phenomenon shows that, there is still an area to be improved in order to produce a highly demand students especially in their generic skills. Moreover, the standard deviation for each GSA

indicating a relatively small variability in the distribution as shown in Table 4.

Table 5 Mean Score for GSA Based Employers' Type

Type of Industry	Skills	Mean	SD
Manufacturing	CS	4.12	0.73
	CT	3.99	0.71
	LLL	4.23	0.67
	ME	4.28	0.68
	TW	4.17	0.77
Average		4.158	0.712
Automotive	CS	4.17	0.72
	CT	3.91	0.75
	LLL	4.24	0.64
	ME	4.43	0.62
	TW	4.19	0.73
Average		4.188	0.692
Public Service	CS	4.48	0.55
	CT	4.18	0.57
	LLL	4.35	0.58
	ME	4.48	0.63
	TW	4.32	0.72
Average		4.362	0.61
Electric/Electronics	CS	4.80	0.42
	CT	4.13	0.35
	LLL	4.70	0.47
	ME	4.71	0.46
	TW	4.60	0.51
Average		4.588	0.442
Consultancy	CS	4.25	0.65
	CT	3.91	1.07
	LLL	4.24	1.04
	ME	4.17	0.94
	TW	4.00	1.13
Average		4.114	0.966
Others	CS	4.48	0.63
	CT	4.15	0.70
	LLL	4.47	0.55
	ME	4.54	0.54
	TW	4.36	0.65
Average		4.4	0.614

The analysis of the responses from employers in 6 different types of industry for the generics skills own by their trainees is shown in Table 5. The table reveals that the average mean score for GSA based on

employers' type is highest for electric/electronics companies and the lowest is for consultancy companies. By examining this table, there might be a significant correlation between the mean score and the employers' type. As an example, in consultancy companies, they rated trainees with low score because of the generic skills are fully implemented in their companies. So, they are strictly rated trainees and their expectation in students' generic skills is also high. Compared to electric/electronics companies, the requirement of implementing generic skills might be very rare or not related. This company emphasized on the technical skills from the trainees.

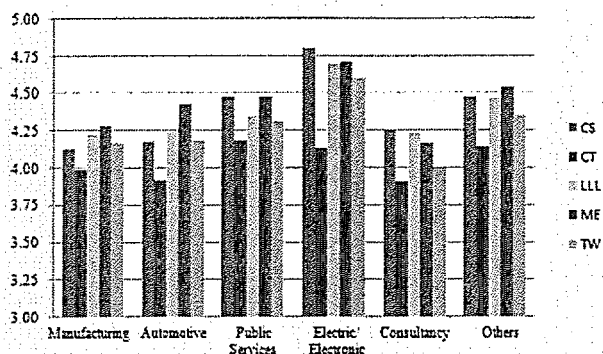


Fig 4 GSA's Mean Score by Type of Industry

Fig 4 is the illustration for each GSA's mean score by each industry. All the employers rated their trainees' critical thinking skill as the lowest rating compared to other GSA. It shows that the trainees still have some difficulty to adapt all the knowledge and experiences gained in study to apply it in industry environment. Besides critical thinking, another skill that needs to polish among the trainees is communication skills. The rating for communication skill is at the second lowest after critical thinking. The trainees need to be trained more either thru technical communication classes or another course that will teach them on how to communicate effectively either by verbal communication or written communication. By having a good communication skill, it will help to increase the trainees' confidence level in order to interact with people or to express their feeling and opinions.

4. CONCLUSION

In this paper, it is found that the company's perception on the employability skills of industrial training students is relatively positive and this is shown in the results and analysis of the questionnaires forwarded to the employers of the companies that had the students from Faculty of Mechanical Engineering in UTeM for industrial training. Industrial training does not only provide professional 'feel' of the actual engineering profession but also contribute in developing GRA

hence increases students' job marketability. As a conclusion Industrial Training is an important phase in students' academic life and play vital role in preparing engineering students for their future career.

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