COMPANY PERCEPTION ON PRACTICAL TRAINING: A CASE STUDY OF COMPUTER SCIENCE STUDENTS UITM PERAK, TAPAH CAMPUS.

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ABSTRACT

Practical training is one of the platforms used to expose students to the real working environment so that they will be ready when they graduate. The objective of this study is to investigate companies' perception on skills performance in terms of Interpersonal Skills, Communication Skills, Intellectual Skills, Initiative Taking, Job Attitude, Personal Efficiency and Leadership Skills. Data were collected based on supervisors' evaluation of the performance of 113 undergraduate students majoring in Computer Sciences (CS110) at UiTM Perak, Tapah Campus who attended Practical Training from 2016 until 2017. The skills performance were built upon the faculty's programme outcomes. The result indicate that there were difference in the items score between company expectations and observations marks related to skills performance.

Keywords: practical training; skills performance; supervisors' evaluation; company perception;

1. INTRODUCTION

Prior to graduation, students need to acquire working experience in an information processing environment. Therefore, practical training will introduce them to the challenging working environment especially in real-life situations, including at work and other settings that are necessary for their future careers and skills acquired during their formal education [1].

Through training placements, students have the opportunity to experience and gain practical knowledge and at the same time develop the skills required by workplace in the future

while pursuing their academic qualifications in the universities [2;3;4;5]. Implementation of practical training at the undergraduate level pertains provide students with an opportunity to apply computer science knowledge taught in UiTM to the real industrial situation. The practical training program for Computer Science diploma students is conducted over the course of two months in every semester break and compulsory for them before graduation. This giving chance for the students to apply theoretical knowledge learned in the earlier years as undergraduates to related, authentic working sites [6].

The aim of practical training is to develop students' ability to apply computer science knowledge taught in UiTM to the real industrial situations, enhance student skills and apply experience working on projects with industry experts. Moreover, the Ministry of Higher Education have stressed out to be employed, our graduates need to dominate in skills such as communication, teamwork, critical thinking and problem solving, leadership, entrepreneurship, lifelong learning and ethics [7]. At the same time, the program aims at making student skills in writing computer sciences or information technology related professional report and conducting presentation by presenting the report on practical training.

Capability of our students when working in industry especially related with company perception need to pay more attention. The research found that the three most important skills required by employers are interaction in groups, employability and self-development [8]. Besides, employers also felt that one of the key factor that will be given consideration when searching for new employees is their employability skill that is required for development of career path [9].

Employability skills is closely related with attitudes and actions. For instance, employees must cooperate with senior employees' apart from voicing out their opinions, suggestions and to come up with decisions [10]. Therefore, the purpose of the study is to investigate companies' perception on skills performance in terms of Interpersonal skills, Communication Skills, Intellectual Skills, Initiative Taking, Job Attitude, Personal Efficiency and Leadership Skills among practical training computer science students of UiTM, Tapah Campus

2. PROBLEM STATEMENT

Industrial training is one of curriculum that must be taken by Computer Science Diploma students (CS110) in order to bridge the gap between theoretical and practical learning, as well as expose students to real-world employment. Hence, the implementation of industrial training needs to be carefully planned and organized and assessed for effectiveness so that the students

acquire professional skills and optimum working experience in line with current industry needs. The effectiveness of the industrial training requires the attention of university and companies to ensure the quality of technical skills of the students able to cope with the competitive work market.

3. OBJECTIVE

The primary objective of this study is to investigate companies' perception on skills performance in terms of Interpersonal skills, Communication Skills, Intellectual Skills, Initiative Taking, Job Attitude, Personal Efficiency and Leadership Skills among practical training computer science students of UiTM, Tapah Campus.

4. METHODOLOGY

This study sought to determine if internship observations (evaluation) fulfilled the companies' expectations (requirements) in order to ensure university preparing students for future careers. This study employed a set of data primarily collected among 113 undergraduate students majoring in Computer Sciences (CS110) at UiTM Tapah Campus who attended Practical Training from 2016 until 2017. Data was collected using an instrument which is an evaluation form namely "The Company's Assessment of Industrial Training Students, Perak Branch, Tapah Campus" to measure the students' skills performance regarding to companies' expectations and observations during internship. The practical training duration is two months. In the form, the expectation section will be filled up by the industrial supervisors during the first week and the observation section will be assessed at the last week of internship using ten-point Likert scale where the greater point presents better skills performance.

The data be analyzed using Microsoft Excel 2013 and Statistical Package for Social Science version 22 (SPSS 22). This study performed two analyses that are Descriptive Analysis and Paired Sample t-test. The descriptive Analysis helps to describe the data into informative way where the students' background data is presented in terms of frequency and percentage [11;12]. Table 1 showed the skills and items considered in this study

Then it followed by Paired Sample t-test where the normality assumption should be initially executed to identify whether the data follow normal assumption or not that measured using the skewness values. A common cut-off criterion for normality is the skewness values should lies between -1 and 1. This test is vital to know whether the data acceptable to proceed with parametric analysis, Paired Sample t-test or not [11;12]. For Paired Sample t-test, it is used to compare the means for two related (paired) units on a continuous outcome.
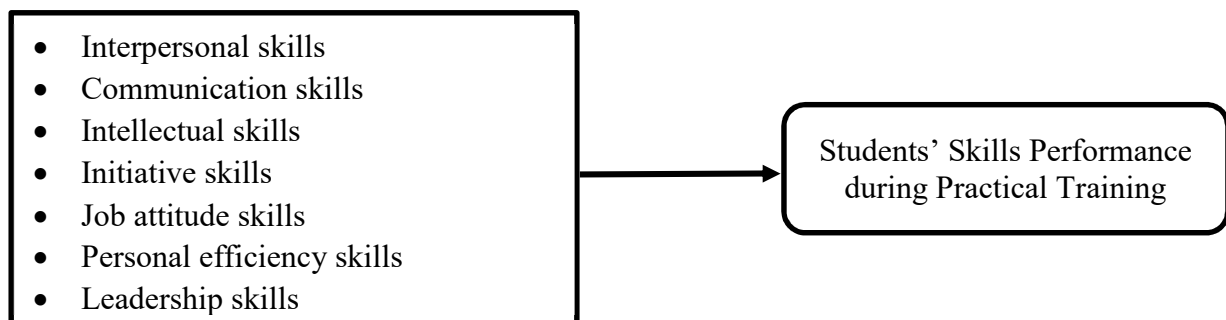
Table 1. Skills and items considered in this study

Skills	Items
Interpersonal	A1: Carry out instructions well.
	A2: Ability to manage conflict that arises in working condition.
Communication	B1: Able to express ideas.
	B2: Able to communicate in English.
Intellectual	C1: Solves problem logically.
	C2: Able to extract important information from various sources to solve problem.
	C3: Has an appropriate level of information technology skill.
Initiative	D1: Able to memorize facts related to work.
	D2: Always find ways to improve his/her performance during job training.
Job attitude	E1: Highly motivated to complete task given.
	E2: Has appositive attitude in facing stressful situation.
	E3: A punctual person.
Personal efficiency	F1: Quantity of work performed is at the level of standard required.
	F2: A fast learner.
Leadership	G1: Willing to take leadership responsibility.

There are two competing hypotheses, the null hypothesis (H_0) and the alternative hypothesis (H_1). In this study the hypotheses stated such:

H_0: There is no difference in the mean observation and expected marks regarding to skills.

H_1: There is a difference in the mean observation and expected marks regarding to skills.

The H_0 will be rejected if p-value $\leq$ significant value (α) = 0.05. It means that there was a significant mean difference between observations and expectation marks of practical training students and vice versa [13]. The conceptual framework of this study is shown in Figure 1.

- Interpersonal skills
- Communication skills
- Intellectual skills
- Initiative skills
- Job attitude skills
- Personal efficiency skills
- Leadership skills

→ Students' Skills Performance during Practical Training

Fig. 1. Conceptual framework of skills towards Students Performance during Training

5. RESULTS AND DISCUSSION

5.1 Descriptive analysis

Table 2 shows that there was 51.3% (58 students) male undergraduate internship while 48.7%

(55 students) were female. It revealed that almost half of total students had their internship at Government sectors by 49.6 % (57 students), followed by Education and Services by 22.1% (25 students) and 18.6% (22 students) respectively. Manufacturing and other sectors shares similar percentage which was 3.5% (4 students). The internship in Accounting & Audit firm was 1.8% (3 students) and the lowest percentage is in Consumer Trading by only 0.9% (2 students).

Table 2. Students' background

Students' background	Attribute	Frequency	Percentage (%)
Gender	Male	58	51.3
	Female	55	48.7
Types of organization	Accounting and audit firm	3	1.8
	Manufacturing	4	3.5
	Consumer trading	2	0.9
	Services	22	18.6
	Education	25	22.1
	Government	57	49.6
	Others	4	3.5

5.2 Paired samples t-test

Table 3 shows the skewness statistics for 15 pairs based on 113 students' evaluation marks of practical training. Based on the skewness statistic of each item, it found that all values were fall within the range 1 and -1. It indicated that the data follows normal assumption and acceptable to proceed with Paired Sample t-test.

Table 3. Skewness statistics of items

Pair	Item	Skewness statistic	Pair	Item	Skewness statistic
1	A1	0.277	9	D2	0.442
2	A2	-0.220	10	E1	0.455
3	B1	0.327	11	E2	0.455
4	B2	0.339	12	E3	0.338
5	C1	0.450	13	F1	0.347
6	C2	0.372	14	F2	0.023
7	C3	0.689	15	D1	0.339
8	D1	0.397			

Based on Paired sample t-test result, For Interpersonal skills, there were significant mean difference between company's expectations and observations for A1 ($t_{112}=8.332$, p=0.000) and A2 ($t_{112}=-2.669$, p=0.009). It showed that students had improvement in carry out instructions

well, A1 (m=1.124, sd=1.434) but not in ability to manage conflict that arises in working condition A2 (m=-0.248, sd=0.987). For Communication skills, both items B1 and B2 assessed showed there exists enough evidence to conclude that there were difference in the mean observed and expected marks with (t_{112}=1.999, p=0.048) and (t_{112}=4.071, p=0.000) respectively. It then revealed that the students had improved than companies' expectation in ability to express ideas, B1 (m=0.212, sd=1.130) and ability to communicate in English, B2 (m=0.796, sd=2.079).

Then according to Intellectual skills, there were significant average difference for C1, C2, and C3 as the statistics obtained (t_{112}=2.847, p=0.005), (t_{112}=3.552, p=0.001), and (t_{112}=6.154, p=0.000) respectively. The mean values indicated that the students had better performance in all C1 (m=0.265, sd=0.991), C2 (m=0.398, sd=1.192), and C3 (m=0.558, sd=0.963). For Initiative skills, it can be conclude that there were enough evidence to Reject H_0, since the values obtained less than significant value (α) = 0.05 for D1 (t_{112}=-3.019, p=0.003) and D2 (t_{112}=5.499, p=0.000). The students had improved in D2 (m=0.549, sd=1.061) however not in D1 (m=-0.274, sd =0.966).

Looking at Job attitude, both E1 (t_{112}=6.937, p=0.000) and E3 (t_{112}=3.085, p=0.003) showed significant mean different in companies' expectations and observations. The mean values for E1 (m=0.531, sd =0.814) and E3 (m=0.257, sd=0.884) indicated that students were better in highly motivated to complete task given and a punctual person. Despite, the E2 (t_{112}=1.635, p=0.105) had not enough evidence to reject H_0 means that there was no mean difference between companies' expectations and observations.

In Personal efficiency skills, there are two items measured such F1 and F2. The p-value for F1 (t_{112}=3.437, p=0.001) revealed that there was a significant mean different between companies' expectations and observations. The mean statistic, F1 (m=0.292, sd=0.903) stated that students were improved in quantity of work performed at the level of standard required. But there was no difference mean for F2 (t_{112}=-0.645, p=0.520). According to Leadership skills, G1 (t_{112}=7.224, p=0.000) there was a significant difference in score between company's expectations and observations where the students also performed better for this skills in terms of willing to take leadership responsibility (m=0.832, sd=1.224).

6. CONCLUSION

Overall, this study found out that there were difference in the items score between company expectations and observations marks related to Interpersonal, Communication, Intellectual, Initiative, Job Attitude, Personal Efficiency and Leadership Skills. However there are two items

such E2 (has appositive attitude in facing stressful situation) measured under Job attitude and F2 (a fast learner) measured under Personal efficiency had no differences in the mean of observed and expected marks of Practical training students. In addition, the students also had better skills performance in overall skills evaluated except for skills that related to items such A2 (ability to manage conflict that arises in working condition, D1 (able to memorize facts related to work) and F2 (a fast learner) due to the lower scores in observed than the expected scores.

As conclusion, the students presented excellent in their practical training as they able to dominate the employability skills such as Interpersonal, Communication, Intellectual, Initiative Taking, Job Attitude, Personal Efficiency and Leadership that supports university aims to increase employability students. It is suggested the university to plan a career development program in enhancing the students skills regarding to the way in handling conflict, be passionate and competent in works.

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