

Employer Perceptions of Job Skills in Manufacturing Industry

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Abstract – Job skills are one of the important soft skills for an employee. In fact, many university graduates face obstacles when looking for jobs because of low job skills. The purpose of this study was to identify the employer perceptions of the most important job skills in the manufacturing industry. This study also aimed to determine differences in important job skills based on perspectives of employers, gender, company size, and company type in the manufacturing industry. This study used a survey method for employers in Riau Islands through a questionnaire based on the membership management information system. The Riau Islands Province Chambers of Commerce and Industry has 2437 companies. By using Bartlett, Kotrlik & Higgins Table, population 2437, margin error 0.03, $\alpha = 0.05$, total sample was 119. The questionnaire was sent to the manufacturing industry randomly. Based on the two-way analysis of variance with SPSS V-20, communication skills were the most important job skills. Then, based on the perspective of employers, there were no significant differences between gender, company size, and company type on job skills.

Keywords – perceptions, job skills, manufacturing industry

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1. Introduction

University graduates in Indonesia face difficulties when looking for jobs while employers experience difficulties in finding workers. Head of Bandung Labor Office stated that university graduates were the second-highest contributor to unemployment in Bandung City. Sri Noviyanti in a study by Willis Towers Watson on Talent Management and Rewards since 2014 published in March 2016 stated that eight out of ten companies in Indonesia have difficulty getting university graduates. In fact, companies should not find it difficult to find workers, because the growth of university graduates in Indonesia increases every year. “After India and Brazil, Indonesia ranks third as a country with growth in university graduates of more than 4 percent and an average surplus of 1.5 percent per year. However, companies still have difficulty finding high potential employees” said Willis Tower Watson Indonesia Consultant Director, Lilis Halim, as published by. In addition, [4] stated that career development and industrial productivity will be affected if employees do not have job skills. Thus, job skills are vital skills for employers. Job skills refer to non-technical skills that have to be possessed in addition to technical skills for every employee in the industry. The demand for more competent employees has increased in the era of globalization and technological evolution. According [5], industrialization in Malaysia based on the perceptions of employers and educators and the role of vocational and technical education shows that even though engineering graduates have mastered technical skills, employers are still not satisfied with employees with low communication skills, interpersonal skills, motivation, critical thinking, problem solving and entrepreneurial skills. Certificates are no longer a guarantee of employability in a competitive world. Having basic academic knowledge, skills and good personal qualities is not the only concern for employers because they are also looking for high job skills. Industrial manufacturing employees have to be more skilled and adaptable because the

manufacturing process is assisted by computers and has replaced old technology [6]. Geographically, Riau Islands Province is located close to Malaysia and Singapore; meanwhile, Riau Islands Province has many manufacturing companies. Thus, the demand for workers in the Riau Islands Province is influenced by technological developments to ensure the quality of products and services internationally. A study found a difference in perceptions of various types of the manufacturing sector on job skills. Information and technology skills show significant differences according to the company type. Meanwhile, basic skills, thinking, resources, and interpersonal and personal qualities do not show a significant difference between types of manufacturing sectors. This shows that information and technology skills are not demanded by some employers in various types of manufacturing sectors [17]. Many studies on job skills of graduates have been conducted to determine the factors that affect unemployment in Indonesia, but only a few studies on required job skills by companies to meet the needs of the manufacturing industry. Thus, this study aimed to identify employer perceptions of the most important job skills in Riau Islands Province, Indonesia, particularly in the manufacturing industry. This study also aimed to inform university graduates or job seekers on job skills that have to be possessed in order to be employed and pursue careers in the manufacturing industry. This study also informed the differences in job skills from the perspective of employers based on gender, company size, and manufacturing company type.

2. Literature Review

2.1. Job Skills

[1] defined job skills as non-technical skills that have to be possessed by every worker in the industrial sector apart from technical skills. Employers tend to seek university graduates with employable skills, especially communication and interpersonal skills, problem-solving skills, and the ability to adapt to all kinds of situations in the workplace. No matter what work the employee has to do, these job skills can be considered as supporting skills. Previous studies stated that employers seek certain job skills, attitudes, and behaviors in employees. [7] stated that most employers prefer employees with basic skills and do personal management effectively, have individual responsibility, and have interpersonal and teamwork skills to negotiate, thus making them effective, motivated, have higher integrity and performance. In addition, they are able to adapt to creative thinking and problem-solving skills. [8] stated that the title is

no longer a guarantee for graduates to get the first job. Computerization has made performance measurement transparent because it has turned the business world into a very competitive one. Employers tend to be focused and willing to recruit talented and competent employees to contribute to team success. [3] showed that partially, technical skills had no significant influence on employee performance. Employers are looking for employees with proficiency in English, skills to speak constructively, skills to identify problems and state problems, solve problems, present ideas, and analyze problems in the company and are able to produce effective solutions that can help the company.

2.2. Employer Perceptions for The Importance of Job skills

[9] stated that employers seek employees with good communicators. Furthermore, verbal communication skills have to be possessed by employees in order to be effective in the workplace. [4] stated that communication skills are essential for every employee because they are targeted to support operations in the workplace to gain commitment, build relationships, and be persuasive. [11] stated that the first competency that has to be possessed by employees is the ability to use memos, letters, and write reports to present information. Second, meetings and team assignments with colleagues should always be involved. Third, communication skills that involve directing, motivating, guiding, and evaluating individuals are very important. Fourth, communication skills in promoting to clients on the organization through face-to-face, email, written and visual presentations, and telephone are also of great importance. Interpersonal skills can be defined as essential skills to work well with others, such as peers, subordinates, and superiors to understand their needs and also be sympathetic to them [12]. Teamwork is defined as the ability to function well in multidisciplinary teams, work effectively with others, demonstrate flexibility and adaptability, and also understand and contribute to organizational goals [18]. English proficiency is defined as the ability of students to use English to demonstrate and communicate in written and oral contexts during the study. [19] explained information, communication, and technology skills as the ability to select and practice applicable technology to complete a given task successfully and apply computational skills to solve problems. Problem-solving skills are defined as the ability to solve problems in the workplace using data, knowledge, and facts using logical reasoning, analytical thinking, and the application of scientific and mathematical concepts. Adaptation skills are sought after because employers are increasingly

dependent on flexible job descriptions and also transferring employees to different assignments. [13] stated that time management skill is the ability to manage adversity and be able to engage efficiently. Time management skills involve competence in handling multiple assignments over a period of time without skipping routine activities.

2.3. Three Perceived Job Skill Elements by Employer

A survey by [14] in the University of Central Lancashire UK found differences in perception between male and female respondents on the importance and quality of job skills. Based on the findings, the quality of communication skills and problem-solving competencies was considered more important by male respondents compared to female respondents, while time management skills, flexibility, planning skills, listening skills, and information technology were considered more important by female respondents compared to male respondents. However, a study examined the important perceived job skills by employers of different genders found no significant differences in the relationship between job skills [15]. A survey by [2] found that all the skills and abilities required when recruiting university graduates are important. Foreign language skills tend to be highlighted as an important skill by graduate recruiters in medium-sized companies over small-sized companies (34% vs 28%), while large-sized companies highlight the importance of communication skills over medium-sized companies (63% vs.60 %) and the ability to adapt to new situations (62% vs 59%). [16] found that among the three types of company size, large-sized companies require more job skills than small-sized and medium-sized companies. Job skills that are considered important by all employers regardless of company size are interpersonal skills and thinking skills, as well as personal qualities. These skills are considered the most important for graduates to master as a preparation before entering the real world of work.

3. Method

This study used a quantitative approach by collecting data from the population. Researchers used a post-positivist approach to developing knowledge, such as, cause and effect thinking, utilization of measurements and observations, and theory testing. Data were collected and produced statistical data. The observed independent variables were gender, company size, and type of manufacturing sector. The dependent variable was employer perceptions for job skills in the manufacturing industry. This study was carried out using a survey of employers in Riau Islands Province. The study design was in the form of literature to develop the instrument. The instrument

consists of two parts. Part I obtained demographic information from the respondents, while Part II consisted of employer assessments on the level of importance for each employment skill with a Likert scale starting from (1) “less important”, (2) “important” (3) ”very important”. This study was carried out with the following stages: literature study related to employment, developing instruments, communicating with employers in Riau Islands Province to obtain labor issues, distributing instruments to employers in Riau Islands Province, collecting instruments filled in by employers, instrument reliability test, data analysis, and interpretation. In general, the stages of study can be explained in the figure below.

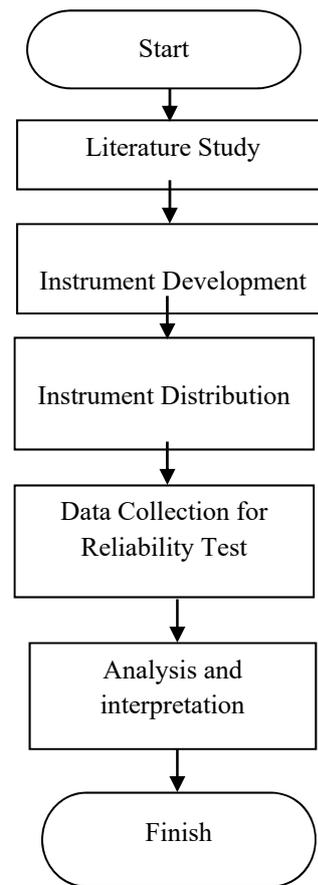


Figure 1. Stages of Study

4. Results

Before conducting data analysis using a two-way analysis of variance, the homogeneous test was carried out. By using Levine’s test, the significance value was 0.125 with Table 1. Thus, $\alpha > 0.05$ which means job skills data were homogeneous.

Table 1. Levine’s Test

F	Df1	Df2	Sig.
2.121	2	116	.125

Source: data results, 2020

4.1. The Importance Level of Job Skills in the Manufacturing Industry

This study identified the employer perceptions of the most important job skills in the manufacturing industry in the Riau Islands. The mean scores were calculated for all dimensions of job skills, where communication skills had the highest mean score = 2.66, followed by problem-solving skills and adaptability with the mean score of 2.62, personal skills and ability to work as a team with the mean score of 2.55, leadership skills with the mean score of 2.50, English proficiency with the mean score of 2.44, and information technology skills with the mean score of 2.42.

4.2. Employer Gender Differences on the Importance Level of Job Skills in the Manufacturing Industry

The second purpose of this study was to find out the difference in the importance of job skills based on the perspective of employers such as gender, company size, and company type in the Riau Islands. Determining the gender group was the first to do. To determine employer gender and employer perceptions of the most important job skills, Two-Way ANOVA was carried out. Based on F-test, the significance was 0.646, which means $\alpha > 0.05$, statistically, there was no significant difference based on gender.

Table 2. Two-Way Analysis of Gender and Company Size

Source	Type III Sum Of Square	Df	Mean Square	F	Sig.
Corrected Model	3.926 ^a	2			
Intercept	20649.333	1	1.963		
Gender	.694	1	20649.333	.599	.551
Company size	3.904	1	.694	6304.491	.000
Gender and company size	.000	0	3.904	2.212	.646
Error	379.939	116	.	1.192	.277
Total	37584.000	119	3.275		
Corrected Total	383.866	118			

Source: Data Results, 2020

4.3. Company Size Differences on the Importance Level of Job Skills

The second component studied was company size. Based on the analysis, the significance value was 0,277 which mean $\alpha > 0.05$, statistically, there was no significant difference based on company size.

4.4. Company Type Differences on the Importance Level of Job Skills

The third component studied was a company type such as the basic and chemicals industrial sector, various industrial sector, and the consumer goods industry sector.

Table 3. Two-Way ANOVA Analysis of Manufacturing Industry Types

(I) Company Size	(J) Company Type	Std. Error	Sig.	95% Confidence Interval	
Small	Basic and chemicals industrial sector	2.997	.756	-4.98	9.25
	Various industrial sector	5.354	.924	-10.69	14.74
	Consumer goods industry sector	2.997	.756	-9.25	4.98
Medium	Basic and chemicals industrial sector	5.578	1.000	-13.36	13.13
	Various industrial sector	5.354	.924	-14.74	10.69
	Consumer goods industry sector	5.578	1.000	-13.13	13.36

Source: Data Results, 2020

The two-way analysis was used to determine manufacturing industry types. There was no significant difference based on manufacturing industry types (significance greater than 0.05).

5. Discussion

Based on the results, the most important job skills based on employers in the manufacturing industry were communication skills. This is in line with a study by [10] which showed that communication skills are an important aspect because employees have to be skilled in communicating with people

from various ethnic backgrounds and be able to use various forms of communication. Likewise, there was no significant difference between men and women in job skills as supported by a survey by [14] at the University of Central Lancashire, England. [16] also showed no significant differences between the medium-sized company and small-sized company. The importance of job skills among workers is emphasized more on the large-sized company than the small-sized company. Likewise, some job skills showed no significant differences based on company type.

6. Conclusion

Based on the results, communication skills had the highest mean score. This shows that all employers placed job skills as the most crucial skill that graduates have to have in order to compete in the global market. In addition, based on the Two-Way Analysis of Variance, there were no significant differences between gender, company size, and company type on the most important job skills. This study allows graduates and job seekers to understand that the job skills have to be possessed. These findings can be useful input for educational institutions to design special development programs, curricula, and co-curricular for students. This can increase the job skills of graduates that are considered important and have to be obtained by students before entering the real world of work in the future.

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