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Perspectives of employers on graduate employability skills: A case of Malaysia

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ABSTRACT

One of the main reasons for the low employment rate of Malaysian graduates is a lack of skills. A substantial number of employers have expressed dissatisfaction with the quality of graduates, claiming that they lack the necessary skills required for successful employment. This research aims to investigate the perceptions of employers on the importance and level of satisfaction with the employability skills of graduates and subsequently examine the gap between them (level of importance and satisfaction). The survey included 63 employers from the manufacturing industry, and the data were analyzed. The results suggest that employers viewed all eight skills, such as English communication skills, thinking skills, positive attitude and teamwork, work planning skills, work discipline, self-motivation, and technology skills, as essential employability skills. However, the gap analysis reveals that they were dissatisfied with the skills possessed by the graduates, indicating that the skills of the graduates fell short of their expectations, which is consistent with their dissatisfaction. The highest differences between satisfaction and expectation arise from English communication skills and thinking skills, followed by self-motivation, a positive attitude, teamwork, work planning skills, technology skills, and work discipline skills. This study provides important insights for graduates, higher education institutions, and policymakers in Malaysia, as well as in countries facing the issue of the low employability of graduates.

Contribution/ Originality: Currently, there is little research in Malaysia that measures the importance and satisfaction level of the employability skills of graduates from the employer's perspective. This research fills the research gaps by investigating how employers perceive and prioritize the employability skills of graduates to create an inclusive workplace.

1. INTRODUCTION

The high unemployment rate among Malaysian graduates is one of the primary concerns for Malaysian society and government authorities. The working environment has changed, as have the skills required by employers. Technical ability is no longer the sole factor considered during hiring, with graduates now expected to be well-equipped with various skills to gain employment.

Malaysia recorded a total of 5.61 million graduates in 2021, up from 5.36 million in 2020 (Department of Statistics Malaysia, 2022). The unemployment rate in February 2023 was 3.5%, equivalent to 591,900 people under unemployed status (Trading Economic, 2023). The unemployment rate remained at 3.6% in August 2022 and January 2023 (Trading Economic, 2023). For the past ten years, the unemployment rate has been relatively low and consistent at around 3%, which is considered the natural rate of unemployment, and it simply means that the population of Malaysia is nearing full employment. However, a look at the data on graduate unemployment reveals a startling fact: 197,400 graduates are unemployed (out of 591,900 unemployed people), accounting for 33.4% of the total unemployment rate. The question now is why there is such a high unemployment rate among Malaysian graduates.

The top three sectors which are popular among unemployed graduates in Malaysia are manufacturing, social sciences and business and law (New Straits Times, 2022). More than two-thirds of the unemployed graduates are actively seeking employment in these sectors (The Edge Markets, 2019). One key factor in the high unemployment rate among Malaysian graduates is that many employers are not satisfied with the quality and skills of graduates, which has a direct impact on the employability of graduates (NST Education, 2019; Vincent, 2020). A survey by Job street on the perception of employers towards the standards of fresh graduates reveals that only 8% of employers rated fresh graduates as 'good', while the remainder rated them as 'average or bad'. According to a subsequent survey, most employers prefer to hire experienced workers, with 71% preferring to upskill existing employees to meet the skills needed. Only 29% of employers prefer to hire new employees. Because of this, Balvin (2017) concludes that fresh graduates are always at a disadvantage when competing with experienced workers for employment. The labor market will only become more competitive as the number of fresh graduates increases year after year and employers themselves continue to prefer hiring experienced workers.

The hiring industries themselves are now looking beyond academic results, and graduates are expected to possess other skills to stand out and be more employable. Soft and work skills have been highlighted as two of the more important skills (JobStreet.com, 2019), with 50% of employers believing that graduates should focus on the relevant skills to be prepared for future employment. Unfortunately, quality and skills mismatches exist between graduates and the demands of employers (Khazanah Research Institute, 2018). The employers highlighted that many fresh graduates lack the necessary communication skills, particularly when communicating in English (Nadarajah, 2021). Weak command of the English language (52%) and poor communication skills (49%) are the main reasons why Malaysian graduates are not being employed. Malaysian employees were ranked third in the English Language Assessment (ELA) test programme initiated by Job street behind two other neighboring countries (Singapore and the Philippines) (Si, 2011). Additionally, in most business environments, people will need to collaborate effectively, which is why hiring managers or employers place a high priority on communication skills. Furthermore, employers expect graduates to have better thinking and problem-solving abilities, the ability to plan their work, work in teams, display professionalism, and use technology. These are the in-demand skill sets required to boost the employability of graduates. Employers clearly expect graduates to have multiple skill sets outside their area of expertise (Vincent, 2020).

Another major development is that the Malaysian government has begun to actively push for the adoption of Industry 4.0 in automation and digitalization (Randstad Malaysia, 2023). With the objective of making Malaysia the Industry 4.0 hub in Southeast Asia, Malaysia aims to increase productivity by 30% per person in the manufacturing sector, grow the contributions of the sector to the Malaysian economy by 54%, increase the number of highly

skilled workers, and strengthen the ranking of the country in the Global Innovation Index (Tanius, 2018). As a result, the Malaysian manufacturing industry is an essential driver of the economic transformation of the country. Owing to this sector, Malaysia still holds a remarkable position in the export of manufacturing products and services and job creation despite global economic uncertainties (Malaysian Investment Development Authority, 2023). Again, the employability of graduates will remain a major concern as Malaysia gradually transitions into the Industry 4.0 era, should this mismatch between the skills of graduates and the needs of industry persists.

Bhatti et al. (2023); Lisá, Hennelová, and Newman (2019); and Noor and Asri (2023) focused solely on the types of general employability traits, neglecting important skills like work discipline and self-motivation. Rasul, Abd Rauf, Mansor, Yasin, and Mahamod (2013) focused on communication skills, problem-solving skills, teamwork skills, and personal qualities in the manufacturing industry without examining work planning skills, professionalism (including work discipline), or self-motivation from the perspective of employers.

Overall, many studies are lacking in examining the employability skills that delves into industry-specific skills that employers value. Employer perspectives from different industries might require different skill sets from their graduates and their abilities to work across multiple disciplines. This research fills the research gaps by investigating how employers perceive and prioritize the skills that they demand and how it impacts hiring decisions to create an inclusive workplace.

This study is conducted to investigate the perceptions of employers on the importance and level of satisfaction of eight employability skills (English communication skills, thinking skills, positive attitude and teamwork, work planning skills, work discipline, self-motivation, and technology skills). This paper starts with a literature review, followed by methodology, data analysis, and discussion of the findings.

2. LITERATURE REVIEW

2.1. Job Matching Theory

The purpose of the job matching theory, according to Chan, Ahmad, Zaman, and Ko (2018) , is to explore the matching process between employer and employee in the job market (McGrew, 2018; Noor Hazilah, Abdul Hamid, & Islam, 2014). According to the theory, firms with job vacancies will actively look for suitable candidates, and job seekers will look for firms with suitable jobs until both parties find a good match (Noor Hazilah et al., 2014). Employment occurs when the skills of graduates match and meet the expectations of employers.

The Job Matching Theory measures the ability of graduates to apply the knowledge learned from universities at workplace (Gainedenova, Han, & Subaashnii, 2019). According to the Job Matching Theory, adequate skills and capabilities are crucial to getting a job within 6 months after graduating (Awang, Agus, Yussof, & Mohamed Makhbul, 2011; Ismail, Yussof, & Sieng, 2011). Mason, Williams, and Cranmer (2009) highlighted that imperfect information about the graduates and the rigidities of institutional and labor markets hinder the job hunting and placement of the university graduates (Noor Hazilah et al., 2014).

Several studies have highlighted the different perspectives on the employability of graduates among graduates, universities, and employers, which is the primary cause of the skills gap and unemployment among graduates. Graduates thought their qualifications and skills were adequate (UNESCO Institute of Statistics, 2012), while universities claimed to have adequately equipped them for real-life employment (Baharudin et al., 2012). Employers, on the other hand, argue that new graduates lack the essential skills needed for employment (Malay, 2020; Tan & French-Arnold, 2012), which is consistent with the research on accounting graduates by Ngoo, Tiong, and Pok (2015). Likewise, a study by McKinsey discovered that, while more than 70% of institutions stated to have properly trained and prepared students with the necessary work skills, only 40% of employers agreed with this statement, indicating that more than half of the employers believe that students do not have the right skills (Kenayathulla, Ahmad, & Idris, 2019).

According to the findings of another study by Tan, Chew, and Kalavally (2017), there is a slight discrepancy between academics' and employers' perspectives on the skills that engineering graduates need. Employer's value analytical skills, but academics believe that engineering graduates should be capable of lifelong learning. Baharudin et al. (2012) found that graduates and universities place a greater emphasis on acquiring and teaching teamwork and communication skills, but industry players were looking for graduates with creative and critical thinking skills. Such divergent viewpoints need to be addressed to cultivate the next generation of graduates with the essential skills and abilities to meet the demands of the job market and employers.

2.2. Graduate Employability Skills

In the Malaysian context, graduate employability has been defined as the marketability of graduates in the workforce (Chan et al., 2012). The business environment today is far more challenging than it has been in the past, and a higher education qualification is no longer a guarantee of employment for graduates (Gainedenova et al., 2019; Sule & Ntawigaya, 2021). Attributes such as soft and work skills have become prerequisites for graduates seeking employment (Tan et al., 2017). With the dawn of a new era of digital technology, more automation and robotics are being employed, which fundamentally changes the nature of manufacturing operations while also changing how employees should work.

The Malaysian Qualifications Framework (MQF) version 2.0, which is under the custodianship of the Malaysian Qualifications Agency (MQA), emphasizes a number of skills that graduates should master to compete in the job market and gain employment, including communication skills, cognitive skills, practical work skills, personal and entrepreneurial skills, interpersonal skills, leadership, autonomy and responsibility, digital skills, and ethics and professionalism (Malaysian Qualifications Framework, 2020). These attributes, which are incorporated in all levels of higher education qualifications in the form of learning outcomes, are crucial in developing graduates who can fulfil the demands of employers and secure employment. Some of these skills are discussed in the following subsections:

2.3. English Communication Skills

English communication skills refer to the ability to use the English language to communicate and convey messages in both written and spoken contexts (Chan, Ahmad, Zaman, & Ko, 2018). Poor communication skills have become a significant factor in graduate employment (Elanttamil, Hee, Isai, & Selvajothi, 2019; Iqbal, Sarala, & Venosha, 2019). Many studies (Carvalho & de Campanella, 2021; Chan et al., 2018; Gainedenova et al., 2019) have found communication skills and English language proficiency to be important employability skills from the perspective of employers. Because of the growing trend of globalization, communication skills and professionalism have become an important emphasis for employers, enabling graduates to communicate effectively with others from different backgrounds, some even from different countries, and be able to share and express ideas with each other. The following hypothesis is constructed:

H_1: There is a significant difference between the importance and satisfaction of the English communication skills of graduates from the perspective of employers.

2.4. Thinking Skills

Thinking skills, also known as higher-level cognitive skills, refer to the ability to think critically, creatively, innovatively, and analytically and, at the same time, apply knowledge in a variety of contexts (Hamid, Islam, & Abd Manaf, 2014). According to prior research, thinking skills are crucial and highly valued by employers because they enable a person to comprehend information, evaluate, structure, and deconstruct problems, generate a number of alternatives, critically evaluate each alternative, and select the best solution, strategy, and practice for the problems they face (Chan et al., 2018). Employers prefer to hire graduates with strong thinking skills that could help them

meet business challenges and maintain the competitive advantage of their businesses (Gainedenova et al., 2019; Malay, 2020). The following hypothesis is developed and tested:

H_4: There is a significant difference between the importance and satisfaction of the thinking skills of graduates from the perspective of employers.

2.5. Positive Attitude

A positive attitude, a form of personal skill, assists individuals to cope better in a competitive and challenging working environment, allowing them to maintain their psychological and physical well-being. Several studies (Awang et al., 2011; Saleh & Lamsali, 2019) have demonstrated that employers are looking not only for individuals with strong technical skills but also with a positive attitude. An individual with a positive attitude will not only be able to motivate themselves internally but will also indirectly impact others by energizing and inspiring colleagues at work (Indeed, 2022; Saleh & Lamsali, 2019). As a result, the following hypothesis ensues:

H_5: There is a significant difference between the importance and satisfaction of the positive attitude of graduates from the perspective of employers.

2.6. Teamwork

Teamwork is defined as the ability of an individual to work collaboratively and effectively with others to achieve shared goals and objectives (Chan et al., 2018). It is an essential interpersonal quality that every graduate must possess to join the workforce (De Prada, Mareque, & Pino-Juste, 2022). Teamwork skills are crucial in every industry, especially when working in an environment with diverse racial, social, or educational backgrounds, and are recognized as the key to success at work, assignments, and projects. Everyone possesses different skills, talents, and strengths, and effective collaboration can create synergies and aid in the achievement of goals and objectives. Hence, employable graduates are expected to have the ability to cooperate and work together with others as a team, contribute ideas to the team, and share the workload within the team. The following proposition is made:

H_6: There is a significant difference between the importance and satisfaction of the teamwork skills of graduates from the perspective of employers.

2.7. Work Planning Skills

Work planning skills are a form of practical work skills that refers to the ability of an individual to plan and arrange daily tasks, as well as manage time efficiently, to complete the given work and task (Neetima & Swati, 2017). Previous research has found that employers, particularly in the manufacturing industry, believe that it is important for graduates to have planning and organizing skills because they are required to be independent and able to manage the task and assignment given within the time frame (Chan et al., 2018; Rasul et al., 2013). Individuals with good work planning skills can manage their priorities, which is necessary for success and survival in the workplace (Nadarajah, 2021). The following hypothesis is suggested:

H_7: There is a significant difference between the importance and satisfaction of the work planning skills of graduates from the perspective of employers.

2.8. Work Discipline

Work discipline is an important personal attribute since it shapes the behaviour and controls the action of an individual when exposed to distractions (Al-Dabbagh, Johnstone, Scornavacca, & Sylvester, 2015), such as mobile phones and websites. The importance of work-discipline skills has not been examined in detail. However, with the advancement of technology and the growing trend of teleworkers, the demand for work discipline skills has increased. Work discipline skills keep individuals focused on their work and serve as a motivator to complete tasks,

which directly helps to enhance the performance and productivity of employees at the workplace (Farrer, 2020). This leads to the following hypothesis:

H_6: There is a significant difference between the importance and satisfaction of the work discipline of graduates from the perspective of employers.

2.9. Self-Motivation

A self-motivated individual has the ability to display a high level of energy, respond positively to criticism, and inspire oneself to move forward when confronted with stressful situations (Ramli, Poh, & Nawawi, 2010). There has been no research to support the importance of self-motivation from the standpoint of employers. However, the significance of self-motivation as a form of personal skill was pronounced during the pandemic when people worked from home, which has become a current and growing trend of work style in many industries. The following hypothesis is put forth:

H_7: There is a significant difference between the importance and satisfaction of the self-motivation of graduates from the perspective of employers.

2.10. Technology Skills

Technology skills, also known as information and communications technology (ICT) skills, refer to the ability of an individual to use computers and information technologies (IT) effectively in accomplishing tasks, including sourcing and storing information, processing data, and using applications for problem-solving and communication. Many researchers have insisted that technology skills are one of the must-have employability skills (Mohd Nor, Rasul, & Abd Rauf, 2014; Neetima & Swati, 2017; Rasul et al., 2013), and Malaysian employers are actively seeking candidates and/or employees with adequate digital skills and knowledge (JobStreet.com, 2019). As Malaysia progresses towards Industry 4.0 and every industry begins to deploy technology in the workplace, the reliance on technology to perform work has increased, making technology skills necessary for employment. The following proposition is made:

H_8: There is a significant difference between the importance and satisfaction of the technology skills of graduates from the perspective of employers.

3. RESEARCH METHODS

The study's research framework development places a lot of emphasis on the industry-based skills that employers in various industries demand. English communication skills and thinking skills are classified as must-have skills by employers in this globalized economy. Little studies emphasize positive attitude and teamwork skills as important employability skills, and these skills are important employability skills that can greatly contribute to success in various professional settings; thus, they are chosen as independent variables for this framework. Work planning skills are selected as one of the independent variables because of the inconsistent results found as compared to previous and recent research. The independent variables such as work discipline, self-motivation, and technology skills are selected because of the growing trend of remote employees, and these are the attributes needed to be successful in working from home, yet less research is conducted on these skills. Furthermore, job-matching theory is the concept that governs the framework of this research. Job matching theory discusses the process of matching in the job market between the employer, who needs a suitable and qualified person to fill the vacancy in an organization, and the graduate, who possesses the qualifications and skills that the employer is looking for. Several factors may have had an effect on the matching process and triggered the mismatch between employers and graduates, and one of the major reasons studied in this research is the employability skills of graduates. The skills possessed by the graduates do not meet the expectations of the employers, which has caused the matching to be unsuccessful, and such a scenario of high unemployment among the graduates is happening now.

The questionnaire was developed by adopting the constructs of previous research, i.e., English communication skills (Awang et al., 2011), thinking skills (Hamid et al., 2014), positive attitude (Northern Illinois University, 2023), teamwork skills (Awang et al., 2011), work planning skills (Awang et al., 2011), work discipline (Itang, 2015), self-motivation (Ramli et al., 2010), and technology skills (Rasul et al., 2013).

To increase the validity and reliability of all items in the variables, the questionnaire was sent to three experts for review, including two academicians and one industry expert. The questionnaire was revised and updated based on the feedback received before it was piloted. The Cronbach's alpha of all the items under the perceived importance of the employability skills of this research satisfied the requirement of at least 0.70, which is considered acceptable (Lance, Butts, & Michels, 2006). The target population for this research consists of human resources (HR) managers, hiring managers, and recruiters of manufacturing companies in Malaysia. Those respondents were chosen and considered employers because they made recruitment and selection decisions and knew more than anyone else about finding the right people to fill positions at their respective companies. It was worked out what the total sample size should be using the statistical programme G*Power 3.1.9.2, an effect size of 0.15, an error probability of 5%, and statistical power of 0.80 (Cham et al., 2020) with eight separate variables. As a result, a sample size of 109 should be sufficient to draw a significant conclusion. However, to yield stronger statistical power (i.e., 90%), the results of G*Power indicated that a sample size of 136 was required. As a result, 150 HR managers, hiring managers, and recruiters in the manufacturing industry were targeted to respond to the questionnaire using the purposive sampling method. Snowball sampling was used as another non-probability sampling method through referrals, where respondents referred to new potential respondents for this study, and those respondents referred to another group of new potential respondents for this research (Neuman, 2014). Both sampling methods are used to leverage social networks for referral and hard-to-reach populations, like respondents to the study due to the pandemic. A total of 75 responses were received. However, only 63 responses were valid and met the requirements of the research. Although the sample size is small, it is considered adequate for this study. Taking the cue from Moumen and Mejjad (2021), respondents who are either employers or managers for studies on graduate employability are likely to fall in the range of 30 to 1000 as individuals.

4. RESULTS

Table 1 shows the demographic profile of the respondents. They are primarily between the ages of 41 and 50 (49.2%), with those between the ages of 31 and 40 coming in second (41.3%). The majority of them are married (79.4%), from the Malaysian Chinese ethnic group (79.4%), and possess a Bachelor's degree (65.1%). About 25.4% of them possess a Master's degree, whereas only one employer possesses a doctorate degree. In terms of years of employment, 36.5% of employers have 11 to 15 years of experience, and 31.7% have 16 to 20 years of experience. Only one employer has five or fewer years of work experience. Table 2 displays the company background information of the respondents. Manufacturing companies with more than 200 employees account for the majority of employers (76.2%), with 75 to 200 employees coming in second (15.9%), and five to 74 employees coming in third (7.9%). None of the employers work for a manufacturing company with less than five employees. Almost all of the employers (95.2%) work for private-sector manufacturing companies. The companies with the majority of local ownership employ the most of them (25.4%), slightly more than half (52.4%), in the manufacturing sector. Only 4.8% of the employers work for manufacturing companies with a majority of foreign ownership.

Table 3 depicts the descriptive statistics (yes and no) for the three questions asked of employers. Approximately 85.7% of them stated that their manufacturing organizations are actively recruiting fresh graduates. However, when asked whether the graduates they employ are well-equipped for the workplace, the majority of employers (69.8%) believed that the graduates they hired were not ready for work. When asked which skills (technical or soft skills) graduates lacked, the majority of employers (74.6%) responded that they lacked soft skills, with the balance stating that they lacked technical skills.

Table 1. Demographic profiles of respondents.

Variables		Frequency	
		N	%
Gender	Male	35	55.6
	Female	28	44.4
	Total	63	100.0
Age group	30 years or below	1	1.6
	31-40 years old	26	41.3
	41-50 years old	31	49.2
	51-60 years old	4	6.3
	> 60 years old	1	1.6
	Total	63	100.0
Marital status	Single	13	20.6
	Married	50	79.4
	Total	63	100.0
Ethnic group	Malay	6	9.5
	Chinese	50	79.4
	Indian	6	9.5
	Others	1	1.6
	Total	63	100.0
Highest academic qualifications	Bachelor's degree	41	65.1
	Master's degree	16	25.4
	Professional's degree	4	6.3
	Doctorate degree	1	1.6
	Others	1	1.6
	Total	63	100.0
Years of working experience	5 years or less	1	1.6
	6-10 years	5	7.9
	11-15 years	23	36.5
	16-20 years	20	31.7
	> 20 years	14	22.2
	Total	63	100.0

Table 2. Company background information of respondents.

Variables		Frequency	
		N	%
Size of employees	5 - 74	5	7.9
	75 - 200	10	15.9
	> 200	48	76.2
	Total	63	100.0
Types of organisations	Public	3	4.8
	Private	60	95.2
	Total	63	100.0
Types of ownership	No answer	3	4.8
	Fully local	8	12.7
	Majority local	16	25.4
	Majority foreign	3	4.8
	Fully foreign	33	52.4
	Total	63	100.0

Table 3. Results of questions posed to employers.

Questions		Responses	N	Percentage
1.	Does your organization actively recruit fresh graduates?	Yes	54	85.7%
		No	9	14.3%
2.	Do you think the fresh graduates you employed are well-equipped for the workplace?	Yes	19	30.2%
		No	44	69.8%
3.	Which area do you think they lack in terms of preparation for the workplace?	Technical	10	15.9%
		Soft	47	74.6%
		No answer	6	9.5%

The expectations of employers about the employability skills of graduates were then compared with their levels of satisfaction. As shown in Table 4, employers valued positive attitudes the most, followed by English communication skills, technology skills, self-motivation, and teamwork, work planning skills, and thinking skills. Although work discipline had the lowest mean, all of the scores were above four on a scale of five, indicating that employers consider all of the skills to be crucial. However, their expectations were higher than the levels of satisfaction with the skills possessed by graduates. Technology skills appeared to have the highest mean, followed by work discipline, work planning skills, teamwork, and positive attitudes, all of which scored between 3.50 and 3.88. Three skills scored less than 3.50, namely English communication skills and self-motivation, with thinking skills scoring the lowest. The results of a paired sample T-test with a p-value of 0.05 revealed that there were significant differences between the expectations of employers and their levels of satisfaction, implying that the quality of skills possessed by the graduates fell short of the expectations of employers. English communication and thinking skills (gap = 0.94), self-motivation (gap = 0.91), a positive attitude (gap = 0.81), teamwork (gap = 0.58), work planning skills (gap = 0.52), technology skills (gap = 0.48), and work discipline (gap = 0.30) were the areas with the largest differences. As a result, all eight hypotheses are accepted.

Table 4. Comparison of expectations and levels of satisfaction of employers.

Soft skills	Importance	Satisfaction	Gap	P-value
English communication skills	4.36	3.42	0.94	0.000
Thinking skills	4.17	3.23	0.94	0.000
Positive attitude	4.40	3.59	0.81	0.000
Teamwork	4.19	3.61	0.58	0.000
Work planning skills	4.19	3.67	0.52	0.000
Work discipline	4.15	3.85	0.30	0.002
Self-motivation	4.33	3.42	0.91	0.000
Technology skills	4.35	3.88	0.48	0.000

5. DISCUSSION AND IMPLICATIONS

This research has achieved its objectives of investigating the importance and level of satisfaction of employers in the manufacturing industry with graduate employability skills, using the job matching theory as a foundation. Despite the small sample size, the study confirmed previous research regarding the gaps between the skills that the graduates possessed and the needs of the employers (Baharudin et al., 2012; Kenayathulla et al., 2019; Khazanah Research Institute, 2018; Ngoo et al., 2015; NST Education, 2019; Tan et al., 2017; Tan & French-Arnold, 2012; Vincent, 2020) based on the data collected from very experienced HR managers, hiring managers, and recruiters (more than 90% of them have worked in manufacturing companies for 11 or more years) among 76.2% large and 15.9% medium-sized manufacturing companies (based on the number of employees employed). The findings will have major implications for the likelihood of graduates getting a job (Awang et al., 2011; Ismail et al., 2011).

Based on the job matching theory, it appears that the different perspectives on the employability of graduates between the graduates, universities, and employers still exist, despite a considerable number of studies conducted a decade ago. Although MQA revised the MQF in 2017 to broaden the range of skills to be incorporated in all levels of higher education qualifications (from certificates to doctoral degrees) in the form of learning outcomes for all academic programmes, their level and extent of achievement have yet to result in the desired outcomes for the graduates and employers. This has two implications: first, the focus and effectiveness of programme design, delivery, and assessment methods in meeting the level and range of skills; and second, the expectation that the range of skills will expand as the work environment continues to change (Vincent, 2020), with the pandemic accelerating the pace of change. This problem will intensify in the coming years as more graduates compete for fewer jobs, and only those with the required skills will be employed. It implies the roles played by graduates, universities, and policymakers in meeting the demands of the job market and employers.

Table 4 provides useful insights into the types of skills that employers regard as important, which can assist universities and policymakers in determining which skills to prioritize. Corroborating the literature, the employers in the manufacturing companies rated all the employability skills as highly valuable to them. Accordingly, employers valued positive attitudes the most, followed by English communication skills, technology skills, self-motivation, teamwork, work planning skills, thinking skills, and work discipline.

The employers recognized that graduates would have sufficient technical knowledge to perform their jobs, given that just 15.9% of those surveyed stated that graduates lacked technical skills. Hence, they opined that having a positive attitude is crucial, particularly when working in a competitive and challenging environment such as the manufacturing industry. With foreigners owning the majority of companies (57.2%) and 25.4% having minority foreign ownership, it is therefore not surprising that employers value English communication skills. Many manufacturing firms in Malaysia employ expatriates and foreign labor in management and operational roles, respectively, and graduates must be able to communicate with them in a common language such as English. Further, many of these large and medium-sized companies conduct business internationally, making English language and communication skills even more important. In addition, it is not unexpected to see technology skills being rated among the more valuable skills. The advent of Industry 4.0 and the nature of manufacturing companies conducting businesses across borders necessitate the ability of graduates to increasingly use computers and IT effectively in completing their tasks, which explains technology as a must-have skill for employability purposes. Compared with previous studies (e.g., Tanius (2018)), employers prioritize the research skills and practices and the professional expertise to solve problems as the primary employability skill sets that a graduate should have in the industry. While Nadarajah (2021) revealed that analytical skills are highly demanded in the Malaysian job market.

This study has contributed to the literature on self-motivation and work discipline, both of which are seen as important personal skills by employers. Along with a positive attitude, self-motivation and work discipline can serve as differentiating factors to distinguish graduates. With shifting work patterns, the advancement of technology, and the demanding nature of working in manufacturing companies, self-motivation and work discipline are predicted to become increasingly important employability skills in the future. Similarly, the ability to work in teams has been identified as an essential interpersonal skill that graduates should possess, particularly in manufacturing companies made up of a workforce of diverse racial, social, or educational backgrounds, especially in large and medium-sized organizations. This also applies to graduates working on specific projects, where effective collaboration across units in manufacturing companies is vital to success.

Work planning skills, a form of practical work skills, are recognized as another critical skill by employers in the manufacturing industry since graduates are also expected to be able to work independently and manage the tasks and assignments given to them, especially in projects requiring tight deadlines. Employers in manufacturing companies, on the other hand, have also rated thinking skills as being of utmost importance. Some issues faced in the manufacturing environment demand that graduates be able to think critically, innovatively, and analytically to arrive at solutions. Given the ratings in Table 4, it is apparent that employers rated soft and technical skills as more significant than cognitive and practical work skills.

Table 4 also provides insights into the levels of skills that employers consider important and their evaluation of the extent of achievement of these skills by graduates. It is interesting to note that the employers perceived the graduates to possess better technology skills (3), followed by work discipline (8), work planning skills (6), teamwork (5), and a positive attitude (1), although they fell short of expectations. Three skills scored below 3.50, namely English communication skills (2) and self-motivation (4), with thinking skills (7) being the lowest. In addition, there are significant differences between all the skills rated as important and their levels of satisfaction. By comparing the two (importance and satisfaction), it is therefore not surprising to find significant disparities. English communication and thinking skills were the most noticeable differences, then self-motivation, a positive attitude, and teamwork, work planning skills, technology skills, and work discipline.

The findings benefit graduates, higher education institutions, and policymakers. While universities provide graduates with knowledge and skills, it is the obligation of graduates to equip themselves with the necessary and sufficient skills required for employment during their studies. Students must be made aware that a university degree is no longer a guarantee of employment, and employers are increasingly looking for graduates with a certain level of employability skills. They should evaluate themselves based on the skills identified in the study on a regular basis and take the necessary steps to improve in order to distinguish themselves from others. Indeed, universities can only provoke the development of skills; it is entirely up to individuals to master them. This is more so for personal skills (positive attitude, work discipline, self-motivation, and willingness to improve on English communication skills), which are harder to teach. Equally important is the spirit of lifelong learning, in which graduates should continue to update their knowledge in their areas of expertise and enhance their English language and technology skills. Many employers value the additional certificates shown to them by graduates on top of their academic qualifications, as they represent not only that the graduate is learning constantly but also, more importantly, the reflection on the attitude of the individual. In addition, students could be encouraged to participate in extracurricular activities that help them develop their soft and work skills. A point system and awards can be instituted, and the achievement of students through these activities can be noted in their transcripts.

For higher education institutions, the findings serve as a self-check on the extent to which the learning outcomes specified by MQA are met for the range and level of skills required. It suggests that universities should revisit their focus and strategies in programme design, delivery, and assessment methods to place a greater emphasis on soft and work skills at the appropriate levels. Identification of skills, and subsequently, gaps should be made a regular agenda items of the Industry Advisory Panel meetings. The industry should be invited to deliver guest lectures, seminars, or workshops to students on a regular basis, addressing not only the discipline area but also skills development. Capacity building related to outcome-based education and skills development should be provided to academic staff on a frequent basis, covering topics such as programme design (linking learning outcomes/skills effectively to delivery and assessment) and continuous monitoring and review. Employers could be invited to the campus to evaluate the quality and skills of students through various means, such as project presentations and student events. It is important to increasingly transfer the responsibility for learning to students by assigning them meaningful and challenging tasks with proper support, which results in richer development of skills, and then asking them to reflect on what they have learned. Academic staff, on the other hand, should be cognizant of the skills required in the changing work environment and be innovative enough to instil current and future skills in students through the incorporation of technology skills and various activities conducted inside and outside of classes.

For policymakers, it is time to re-examine present metrics that rely solely on graduating on time and measuring attainment of learning outcomes as the basis for evaluating higher education institutions. Specific measures to address skills mismatches need to be developed, as these can impact the productivity of the country and its ability to attract foreign investments and, hence, create more jobs for the growing number of graduates. The government could collaborate with the industry to introduce skill assessments for fresh graduates to identify deficiencies and point them to the right solutions. Graduate soft and work skills development programmes could be established and implemented to complement the efforts of universities. Manufacturing companies that hire fresh graduates could be given tax incentives.

6. CONCLUSIONS AND FUTURE RESEARCH DIRECTIONS

This study has met its objectives and provided some recommendations for graduates, universities, and policymakers to enhance the skills of graduates and increase their potential for employability.

Some limitations are noted in the study. The small sample size calls for another study with a more representative sample replicated across borders to confirm the findings. Adding to this is a more detailed analysis of

the needs of manufacturing companies of various sizes and the nature of businesses. Since this study focused only on the manufacturing industry, future studies could also include the service industry to determine whether the employability skills required are similar or otherwise. This study focused only on eight skills. The Future of Jobs Report by World Economic Forum in 2020 has identified skills required by future jobs in the Industry 4.0 era, such as negotiation, cognitive flexibility, service orientation, emotional intelligence, judgement and decision-making, coordinating with others, emotional intelligence, people management, creativity, critical thinking, and complex problem-solving (Gray, 2023). It is recommended to incorporate these skills into future research. Finally, this study is cross-sectional in nature. A longitudinal study will enable richer details to be captured, particularly in monitoring changes in the range and levels of skills.

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Transparency: The authors state that the manuscript is honest, truthful, and transparent, that no key aspects of the investigation have been omitted, and that any differences from the study as planned have been clarified. This study followed all writing ethics.
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