Employers' Perspectives on Malaysian Graduates' Skills: A Contemporary Study

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Abstract

This study aims to determine the perspectives of Malaysian employers on the importance of employability skills falling short among engineers, education system at Higher Education Institutions (HEIs), and important graduates' attributes. From this study, a contemporary study was developed and has been designed to serve as a reference by the time of this study was carried out. This contemporary study was developed based on the employers' perspectives (dependent variable), skills falling short, HEIs' education system, and graduates' attributes (independent variables). It is aimed that this proposed contemporary study will be used as an insightful reference for present and upcoming researchers undergoing similar studies.

1. Employers' Perspectives

From the perspectives of employers, a graduate's employability skills will help the employers to overcome challenges faced by the industry and effectively helps to resolve all or any issues that may arise (Rohanai et al., 2020). Employers simultaneously demand that each student has the global 21st century skills, such as communication, teamwork, creativity, and critical thinking, in addition to the additional skills required for Industrial Revolution (IR) 4.0 (Ismail and Hassan, 2019).

In the challenges of the real-working world today, employers are looking for graduates that possess not only technical skills, but also multitasking and responsible in carrying out various tasks as a way of hiring them (Juhdi et al., 2010). Engineering graduates need to impress the employers to hire or retain them in the real-working world by showing their unique skills (Saleh, 2019b). According to Hamid and Razak (2020), graduates must find space and discover the opportunities for self-advancement in order to compete in the real-working world.

Employers are increasingly demanding graduates to have work experience that can be applied and used to make a difference in the real-working world (Diver, 2019). According to Fajaryati et al., (2020), employers demand employability skills such as personal qualities, core skills, and subject knowledge. Employers also demand their employees to obtain all relevant knowledge and skills in order to increase performance and boost productivity (Tsitskari, 2017). Moreover, the employability skills possessed by graduates must be aligned with the skills demand by the nature of the industry (Saleh, 2020).

Previous study in Malaysia highlighted the importance of employability skills required from Malaysian engineering graduates based on the employers' perspectives (Saim et al., 2021). Study by Azmi et al., (2018) highlighted the most important employability skills from the perspectives of employers are teamwork, written communication, oral presentation, willingness to learn, and adaptability. According to Fadhil et al., (2021), soft skills are considered as one of the strengths that may be utilised to find suitable job opportunities in Malaysia.

Employers in Malaysia demand graduates with broader skills and attributes that include problem-solving, critical thinking, team-working, communication, leadership, and potential managerial abilities (Wilton, 2014). However, Chan et al., (2018) stated the most important employability skills in E&E manufacturing industry is

communication skills, and communication skills plays an important role especially in terms of productivity and efficiency of any companies (Fadhil et al., 2021).

According to Rahim et al., (2020), employees' integrity is a critical skill that requires better understanding to prevent organizational issues in terms of performance and reputation. Employers need those who are able to adapt to a dynamic work environment (Misra and Khurana, 2017), and employees that possess three types of skills such as technical, cognitive, and non-cognitive skills (Fajaryati et al., 2020).

Furthermore, employers have a preference to employ graduates with quick learning skills, flexibility, and adaptability to manage market changes and thrive on it (Suarta et al., 2017). Skills such as teamwork and learnability are required in Malaysia's industrial sector, yet, there was a significant difference between the expected level of skills possessed by graduates, and the actual competency level of graduates (Kenayathulla et al., 2019). Therefore, graduates' skills must align with the demand of E&E manufacturing company today if they want to find the employment opportunities (Saleh, 2019a).

2. Employers' Perspectives on Malaysian Graduates' Skills

Employers' dissatisfaction with the skills and abilities of graduates they hire is a global phenomenon and profound to be similar not only to Anglophone countries, but also France, Malaysia, and Turkey have very similar dialogues (Winterton and Turner, 2019). According to Rahman et al., (2019), every employer wants their employees to possess important employability skills that will help with their companies' growths and performances.

However, there are claims from employers that the graduates do not completely acquire the relevant skills required in the real-working world (Zakaria et al., 2020), and lack certain employability skills (Nadarajah, 2021). Due to the range of jobs today involves human skills that are related to artificial intelligence (AI) and automation (World Economic Forum, 2018), employers demand graduates to develop the skills needed between now to 2030 if they do not want to be left behind (Ismail et al., 2020).

Saleh and Lamsali (2020) stated that employers demand the employees to equip themselves accordingly with competencies and capabilities besides excellent academic knowledge before entering the real-working world and face the stiff global competition. According to Fajaryati et al., (2020), employers find job seekers lack of expertise, and insufficient skills are related to the issue of Higher Education Institutions' (HEIs) education quality.

A lot of studies have been conducted to determine the factors that contribute to high unemployment rate in Malaysia on the skills of graduates, however, only a few studies have been conducted on the requirement of highly demanded skills by employers to fulfil the need of the industry (Chan et al., 2018). Yet, employers stated that the greatest deficiencies in skills of the graduates are the ability to communicate and think critically, and tend not to be self-confident, ethical, and disciplined (Wagiran et al., 2020).

Employers stated that they need employees to at least understand the procedures for operating machines, including computers and their programming, but not all graduates in Malaysia can possess critical thinking skills that leads to problem-solving skills outstandingly (Azmi et al., 2018). Malaysian graduates are perceived as reliable and capable performers by employers but lack required work experience and lack confidence in their skills (Disen et al., 2022).

Employers also criticized graduates for being inefficient in the workplace due to the lack of skills required by employers (Heang et al., 2019). According to Noah and Aziz (2020), employers would like to hire graduates who are work-ready, although experience is to be gained when they are in the work, but with adequate skills to begin with, graduates will grasp easier employment and faster career progression.

3. Definition of Skills

Employability is predominantly conceptualized as the skills and personal attributes considered important by industry and needed by graduates in order to secure employment, by expressing the potential to get a desired job (Rowe and Zegwaard, 2017). According to Alrifai and Raju (2019), one of the important policy strategies to improve mobility and wages of a country is skill development, and employees must have the information and abilities necessary to improve the performance and competitiveness of the company.

Employability is generally defined as a set of skills that can be categorized into three groups, which are the generic skills (teamwork, communication abilities, organizing, and planning), discipline-specific skills (skills in engineering, law, and social work), and personal qualities (self-assurance, resilience, loyalty, and integrity) (Lisá et al., 2019). Employability is a key concept in higher education worldwide (Cheng et al., 2022), and it is important for graduates to possess the skills aligned with the demand of the industry to be hired by employers (Saleh, 2019a).

Employability skills, often referred to as transferable skills, are a collection of various personal attributes that include cross-functional and generic skills required to successfully secure jobs and sustain it (Awadhiya, 2022). Employability is defined as a set of achievement-skills, understandings, and personal attributes that make graduates more likely to gain employment and be successful in their chosen occupations, which benefits

themselves, workplace, community, and economy (Knight and Yorke, 2003; Harvey, 2005; Yorke, 2006; Maxwell and Armellini, 2018).

Employability is about having the capability to gain initial employment, maintain employment, and obtain new employment if required, while skill is an ability to perform a specific task (Hillage and Pollard, 1998; Department of Education, Science, and Training, 2006). Graduates' employability is also defined as the knowledge, skills, and attitudes that graduates are expected to be able to demonstrate, reflecting what they have acquired during their studies (Hillage and Pollard, 1998; Clarke, 2018).

4. Current Employment Trends

The world of employment is impacted by major trends that are imposed by the ongoing industrial advancements (Eryani and Munifi, 2019). Due to the continuous changes in the workplace, basic and traditional skills have lost relevance and hardly help graduates to find suitable jobs (Saleh and Lamsali, 2019). The requirements for new skills that are in line with the development of modern technology have been driven by the shifts in employment trends brought by IR4.0 (Jamaludin et al., 2023).

The manufacturing industry in Malaysia need highly-skilled employees to support the growth of the industry (Kenayathulla, 2021). IR4.0 is a virtual reality (VR) fusion system based on traditional manufacturing that combines cyber-physical systems, the internet, Internet of Things (IoT), and Industrial Internet of Things (IIoT), artificial intelligence (AI), machine learning, hyper-converged infrastructure, deep learning, virtualization, and more to create an intelligent production system (Xu et al., 2014; Li, 2018; Li, 2020; Xu et al., 2018; Li and Zhou, 2020).

According to Alekseeva et al., (2021), the demand for AI skills has been growing fast, and is arguably the most promising technology currently under development which has potential to be used across a wide range of industries and functions. Gofman and Jin (2022) emphasized the need for employees with AI skills can serve as a proxy for the usage of AI technology in IR4.0 due to the use of AI technology by industry requires a highly specialized human capital.

Digitalization, automation, and the development of new adaptable technologies have an increasing demand in the labor market (Prüfer and Prüfer, 2020). Industries have been working to hire the number of employees with AI-related skills, in which the employers are looking for employees with experience in AI, machine vision, deep learning, speech recognition, and other areas that are directly related to the knowledge of AI technology or ability to use AI-related software (Alekseeva et al., 2021).

Furthermore, twenty-first (21st) century skills are now in high demand by the employers, and these skills are appearing on companies' job advertisements from various industries (Alqahtani, 2020). Study by Alqahtani (2020) also emphasized that employers are seeking for 21st century skills to bridge the gap between graduates' education and actual skills possessed, and hiring companies claim that 21st century skills are important for workplace success and must be developed in job seekers in order to have better employment opportunities.

5. Research Findings

Based on the evaluation made by E&E employers in Penang's industries, the results indicated that engineers show mismatched skills required by employers. Employers today are actively looking for graduates who have already mastered employability skills at the time of graduation, and want these skills to be demonstrated immediately upon hire (Gauthier, 2020). According to Kenayathulla et al., (2019), Malaysia needs high-skilled employees to support the growth of industries.

The results indicated employers agreed that engineers demonstrate the ability to use and keep up with emerging technologies in engineering practice. This finding aligns with the insights provided by Adlakha (2023), who highlights the transition in developing countries towards prioritizing technology skills over low-skilled employees, reflecting the demands of the technological era.

According to Chavan and Carter (2018), skills falling short were found to be a factor contributing to graduate unemployment in Malaysia, and was made worse by various mismatch issues, ranging from expectation mismatch to skill mismatch (Abdullah et al., 2019). However, the employers are neutral in agreements with the statements that engineers show mismatched skills required by employers. Thus, statement by Aziz et al., (2023) saying that employers claimed graduates lack the necessary skills is inaccurate at the time of this study being done. Moreover, further investigation is needed to determine this matter.

From this study, the evaluation from E&E employers stated that HEIs' education system can meet the demand of the industry by modifying the curriculum to fit in industry's requirements. Kornelakis and Petrakaki (2020) highlighted changes in digitalization trends demands necessity for new approaches to reskilling graduates in HEIs. This aligns with Ahmad et al., (2018), who emphasized the importance of continuously updating HEIs' education system with new industry discoveries, stating that HEIs' education system must be continuously evolve with digital transformation to maintain competitiveness (Ali and Ibrahim, 2018).

The results revealed that employers agreed with the needs of HEIs to update, improve, and deliver the skills with latest industry requirements to make fresh graduates more work-ready. This is supported by Awadhiya (2022), emphasizing the significance for HEIs to strive towards making sure their graduates are employable and equipped with the skills demanded by the employers of the industry.

Over the years, Malaysian HEIs have consistently produced many graduates (Ibrahim and Nashir, 2022), and HEIs must be able to meet the needs and demands of employers (Ali and Ibrahim, 2018). However, employers discovered that insufficient skills and lack of expertise among job seekers were associated with the education quality of HEIs (Fajaryati et al., 2020). Therefore, there is a need for HEIs' education system to modify the curriculum to fit in industry requirements.

The important graduates' attributes required from the perspectives of E&E employers are illustrate individual skills to resolve problems, based on the evaluation made by E&E employers in Penang's industries. According to Rohanai et al., (2020), employers are looking for graduates who can work independently, skillful in solving difficulties related to technical or non-technical problems, and assist employers in dealing with changes.

The results revealed the graduates' attributes that are important to the industry are the ability to balance knowledge, skills, personality, and attitudes. Supported by Halibas et al., (2020), graduates' attributes are important for graduates' overall growth, and graduates must possess the knowledge and right skillset in order to be employable and work-ready. Aligns with Rook and Sloan (2021), industry suggests that in order to be considered employable, a graduate must possess the necessary skills, attitudes, and work experiences that align with organizational structure.

Furthermore, employers emphasize the importance of graduates to acquire 21st century skills such as effective communication, understand corporate and personal ethics, develop social skills, and respect cultural diversity within a team (McGunagle and Zizka, 2020). The respondents also agreed with important graduates' attributes, in which graduates must have the ability to build relationships, interact, and work-effectively with others in a team. This statement received the same mean of agreement, suggesting that respondents highly value this attribute.

Employers' perspectives from the World Economic Forum (2020) have highlighted problem-solving, self-management, technical, and people management skills as the top skills expected to become increasingly crucial by 2025 (World Economic Forum, 2023). However, this study indicated that illustrating individual problem-solving skills received the lowest agreement among these attributes, despite its significance as noted by World Economic Forum (2023).

6. Conclusions

This study is a part of Master of Science Research, aims to provide a contemporary study that can be used as an informative guide for present and future researchers conducting related studies. It was regarded as accurate at the time this paper was published and created for use the time of this study was being conducted. Therefore, any disagreements resulting from its use and application outside of this context are not the responsibility of the corresponding author. Appreciation is extended to all who have contributed to the support of this study.

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Conflict of Interest

The authors declare that there is no conflict of interest regarding the publication of the paper.

Author Contribution

The authors are responsible for the study conception, research design, data collection, data analysis, result interpretation and manuscript drafting.

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