

**ASSESSING INDUSTRY NEEDS AMONG TECHNICAL AND
VOCATIONAL EDUCATION AND TRAINING (TVET) HIGHER
EDUCATION: THE CASE STUDY**




Fakulti Pengurusan Teknologi dan Teknousahawanan


Universiti Teknikal Malaysia Melaka

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EDUCATION: THE CASE STUDY**

NUR DIYANAH BINTI ALI



A report submitted in partial fulfillment of the requirements for the degree of

Bachelor of Technopreneurship with Honors اونیورسیتی تکنیکل مالایا ملاک

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January 2023

DECLARATION

I declare that this report Final Year Project entitled “Assessing Industry Needs among Technical and Vocational Education and Training (TVET) Higher Education: The Case Study” is the result of my own labour, with the exception of quotes that are referenced in the text.



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Date : January 2023

DEDICATION

This final-year project effort is dedicated to my dear parents in appreciation of their unending support, love, and prayers.

For my supervisor whom have mentored me and provided me with a lot of support,

Profesor Madya Dr Amiruddin Bin Ahamat (UTeM)



And lastly to all my beloved friends that always help me and support me from the beginning until the end of my project.

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Thank you.

ABSTRACT

Numerous TVET institutions have highlighted involvement in the industry as a marketability criterion for judging the quality of TVET higher education graduates. The curriculum provides education and training with a focus on industrial techniques for TVET higher education with an occupational orientation. Therefore, this study is to assess the industry's higher education requirements for TVET. This study was conducted using qualitative analysis techniques, and data collection was conducted in Melaka with four individuals from different industrial companies.

This study was conducted utilising qualitative analysis techniques, and data collection was undertaken in Melaka with four individuals from different industrial companies. The study's findings indicate that the perception of TVET higher education in relation to the industry's needs must be enhanced, particularly in terms of TVET higher education's capabilities. Indirectly, this study explains how vital TVET higher education skills are to the industry in order to maintain the quality of TVET higher education. Consequently, it can help TVET higher education students who have not yet entered the industry be better prepared, particularly in terms of the skills required by industry.

Keywords: TVET, TVET higher education, higher education

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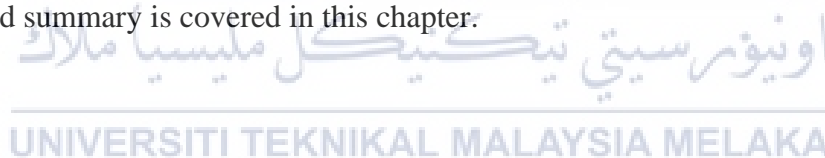
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CHAPTER 1

INTRODUCTION

1.0 INTRODUCTION

The case study of assessing industry needs in Technical and Vocational Education and Training (TVET) higher education is the subject of this chapter. There are eight chapters in all that deal with this research topic. In addition, background of research, problem statement, research questions, research objectives, research scope, limitation of study, definition of terms, significant study and summary is covered in this chapter.



1.1 BACKGROUND OF RESEARCH

Technical and vocational education and training (TVET), which equips young people with the ability to assist in the workplace, includes academic, semiformal, and training. Technical and Vocational Education and Training (TVET) institutes in Malaysia Innovation and technology have fuelled economic progress for ages (Salman et al., 2020). TVET refers to a variety of learning activities that take place in a number of contexts and are aimed at acquiring the skills required for certain labour market jobs (King, 1993); (Rojewski, 2002); (UNESCO, 2006). Governments of developing nations usually prioritise investing in education, especially Technical and Vocational Education and Training (TVET), since it is a

crucial tool for building skilled human capital and assuring equal job and income creation possibilities (Yamada and Otchia, 2021).

The national school system's technical and vocational education and training (TVET) programme are among the nation's top goals for growth of the economy (Mohammad Yunus and Mohamad Hapni Joblie, 2022). The shift toward making Malaysia a productive developed country through developing competent human capital in TVET serves for a catalyst for the nation's economic progress (Mohammad Yunus and Mohamad Hapni Joblie, 2022). The Fourth Industrial Revolution's structure (4IR), the government has undertaken many measures, including a professional development programme for TVET instructors (Ministry Of Education, 2018).

By obtaining the necessary information and skills, Technical and Vocational Education and Training (TVET) seeks to produce grads whom were prepared for work. Additionally, it encourages training in higher education, conversation, problem - solving skills, and thinking skills (Jabarullah and Iqbal Hussain, 2019). A educational plan that emphasises the need to produce graduates who are integrative, standardised, globally, entrepreneur, and lifetime learning has been announced by Malaysia's Ministry of Higher Education in accordance with these imperatives (Hasim et al., 2016). TVET has risen to the forefront for accomplishing these goals since Malaysia aspires to see at most 30 percent of its workers educated as skilled workers around 2030 as meet market demands (Mohammad Hussain et al., 2021). Furthermore, Technical education and skills are essential for creating the human capital needed to turn emerging Malaysian nations are becoming fully developed nations (Omar et al., 2011). Education in technical and vocational subjects, or TVET, is essential not only for social inclusion but also for the expansion and improvement of the country.

In Malaysia, TVET aims to accomplish two things: first, it aims to generate skilled employees, and second, it aims to encourage the creation of skilled employees, or "k-workers," to satisfy the industry sectors' requirements that power the nation's continual growth (Omar et al., 2011). The 11th Malaysian Development Plan 2016-2020 highlights the Malaysian TVET agenda (11MP), which also tends to focus on enhancing life - long learning for training provided,

transforming TVET to meet industry demand, and enhancing the quality of education for improved student achievement and demonstrate the effectiveness (Mee Young Choi, 2021). TVET in Malaysia aims to produce skilled human capital by assuring higher levels of training and education that meet the demands of the labour market and provide opportunities for further education or business development. TVET is predicted to result in a better competent national workforce, which would boost Malaysia's economy has been growing (Minghat and Yasin, 2010). Then, Technical and Vocational Education and Training (TVET) offers a practical alternative route for high school dropouts and students who perform below their capacity in school to realise their full potential and develop stable and substantial professional careers.

Therefore, TVET is education and has training for them especially students such as vocational students, training institutes and so on for job preparation after graduation. According to Mohammad Hussain et al., (2021), to ready student and the others customers as the workforce, TVET gives development and skill. It also provides customized training skills for those who are working but need to update or pick up new skills to improve their chances of landing a job or to boost their output. Vocational skills can now lead to high-paying positions equivalent to those held by professional engineers (Edgar, 2019).

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1.2 PROBLEM STATEMENT

The industry is most worried about a decline in product quality and a scarcity of student talents. According to Salman et al. (2020), the present TVET program in Malaysia mostly are supply-driven, despite the fact that the method is generally intended to fulfill actual or anticipated jobs market need, with little emphasis on matching training to existing jobs. Malaysian students continue to fall short of the criterion for good employees (Malaysian Employers Federation 2011) due to a lack of problem-solving abilities, which are part of employability skills (Zainaf, Robiah and Habibah, 2019). Then, if the industry has employees who do not or lack skills it will have problems for the industry. In contrast to academic students, TVET

students require a competency-based assessment because most sectors look for candidates that have great knowledge and abilities that provide something to the success and growth of the organisation, including communicating, organization, managing, character, and approach (Ismail & Abiddin, 2014).

In addition, according to Mohammad Hussain et al. (2021), to satisfy employment market needs, by 2030, Malaysia wants at least 30 percent of its workers to be high-skilled workers and to accomplish these goals, TVET has taken the top spot on the list of priorities. With that, TVET programmes should meet or exceed the standard criteria stipulated by the relevant sectors or companies. Nonetheless, our country has significant obstacles in delivering a qualified TVET workforce that fulfils industrial demand (Khirotdin et al., 2019). Meanwhile, according to Ramlee (2017), some of the problems that are associated with TVET include a negative perception of the programme, a governance body, a TVET framework, the competence of teaching staff, job mismatching, not being driven by industry, limited allocation, and uncompetitive salaries for TVET graduates. TVET places an increased emphasis on the provision of excellent education at all levels, with the end goal of creating graduates who are highly competent and skilled and who are able to perform well both inside and outside of an organisation (Ramamurthy et al., 2020). This is due to the fact that modern employers want their workers to be proficient in both general and specialised forms of technology in order to be hired.

The needs and skill necessary for Technical and Vocational Education and Training (TVET) graduates remain unclear. Therefore, this case study was conducted to assessing industry needs among Technical and Vocational Education and Training (TVET) Higher Education.

1.3 RESEARCH QUESTIONS

The goals of this research can be determined by the following research question:

- 1) What relationship exists between TVET and industry?
- 2) What is the requirements required by TVET higher education towards the industry?
- 3) How does the skills required by TVET higher education towards the industry?

1.4 RESEARCH OBJECTIVES

As purpose of the study was to examine the industry needs among Technical and Vocational Education and Training (TVET) higher education. The specific objectives of this study are listed below based on the above-mentioned problem statement:

- 1) To examine the relationship exists between TVET and industry.
- 2) To determine the requirements required by TVET higher education towards the industry.
- 3) To investigate the skills required by TVET higher education towards the industry.

1.5 RESEARCH SCOPE

In this scope, the focus is primarily on assessing industry needs among Technical and Vocational Education and Training (TVET) higher education. This research will then discuss the needs and skills required by the industry that TVET higher education needs to meet.

The primary sectors to be examined in the research are the demands and skills that TVET higher education must satisfy for the industry. This is because most industries need skilled workers after they graduate. Thus, it is clear how important skills are especially for those who have graduated suit the requirements of the sector.

In this research, will take respondents from several industries of Melaka to identify the needs that TVET higher education must fulfil.

1.6 DEFINITION OF TERMS

Technical and Vocational Education and Training, (TVET)

TVET education is a skills-based education that focuses on employability skills in an industry (Mohammad Yunus and Mohamad Hapni Joblie, 2022). In essence, TVET stands for technical education or training that aims to develop skills for a person relevant to a vocation in order for that person to find a job and provide a living (Team, 2021). According to the Ministry of Education Malaysia (MOE) (2019) website, TVET stands for Technical and Vocational Education and Training, TVET is a career-oriented procedure of instruction and training with a major with a focus on industry practices, specific areas, TVET would establish its range on acknowledged employment standards, along with focus on motor abilities, useful meaning, and access to industrial training. TVET is defined as "education, training, and skill development in a wide variety of occupational domains - production, services, and livelihoods" (UNESCO, 2016).

Higher Education

By offering a solution to a filled educational path to top qualifying levels as Bachelor's and Master's degrees, higher education could be broadened to assist class mobility (Felce, 2019). After high school, higher education has been the third degree of learning. It includes either undergraduate or graduate courses and is frequently carried out at universities as well as further education institutions

(Nidirect, 2021). Higher education can increase their career opportunities and income potential by letting your studying in subject that motivates you (Nidirect, 2021).

Policy

A government policy would be a piece of law, a regulation, a process, an administrative decision, an incentive, or indeed a volunteer behaviour ((CDC), 2015). Usually, resources reflect policy choices while, various industry policies may have an effect on health ((CDC), 2015). Furthermore, an organisation follows or creates policies such principles, rules, guides, or structures to improvements in life expectancy objectives while, these are frequently laid forth in an easily accessible textual manner (Safeopedia, 2017). Policies are developed to drive and influence all important choices made inside the business, as well as to maintain all actions within a set of recognised parameters (Safeopedia, 2017).

Industry Demand

Industry demand is an industry's overall aggregate demand for products while, in order to calculate market share, company demand is frequently stated as a percentage of industry demand products (Team, 2021). The term "industrial demand" refers to the overall aggregate demand for a certain industry's goods, such as cement demand in the building sector (Jargons, 2016).

Decent Jobs

According to International Labour Organization (2021), decent job as defined "productive work for women and men in conditions of equality, security, and human dignity" while, decent job is critical to establishing a high-quality education workforce. Improved chances for economic development and career integration, allowing individuals to describe about there organising, concerns and participating in decisions affecting, ensuring equitable access to and treatment from it are all part of this concept; also it relates to career opportunities those are efficient and pay fair wages (International Labour Organization, 2021).

Skill Development

In the context of globalisation, skill development is critical to handle the possibilities and difficulties of changing economies and new technology (International Labour Organization (ILO), 2020). Skill development is the process of detecting and addressing skill deficiencies (Eline, 2021). Improve human beings' capacity to do a job-related action that leads to the effective completion of a task. It might be a type of intimacy in which knowledge is gained via precise and repetitive practise (Chale, 2021).

Employability skill

Employability skills are defined as the talent required to land and hold a job, and a more modern use of the word is to signify the education or fundamental talents that should be built upon to develop job-specific abilities (Kenayathulla, Aziah and Rahman, 2019). The skills needed to land, keep, and succeed in a job are known as employability skills (Stephen and Festus, 2022).

Communication

Giving and receiving information through verbal or non - verbal ways, including written, graphics as infographic, mapping, & charting, gestures, signalling, plus behaviours, constitutes the process of communication. Communication as defined "the creation and interchange of meaning" (Nordquist, 2021). In his 1992 book "Communication as Culture," media analyst and theorist James Carey described the communication are "a symbolic process by which reality is generated, sustained, healed, and modified," arguing that by discussing their experience with each other, we create the reality that exists (Nordquist, 2021).

Problem Solving

The process of addressing any kind of difficulty is called problem-solving while, there are several stages to this approach (Instagantt, 2022). These phases begin with identifying the problem and discovering its source while, after the issue and its cause have been determined, the following phase is to identify and execute possible remedies (Instagantt, 2022). Issue solving is the process of analysing a problem and addressing it in the best way feasible given the circumstances while, this process includes analysing the problem root cause analysis, developing

countermeasures, and applying the best solution for the scenario (Toolshero, 2022).

Time Management

Time management has been the coordination of tasks and activities to increase a person's ability's effectiveness while, to enable people to perform much better task in less time is the aim of time management (Wigmore, 2015). Planning ahead and exercising deliberate control over the amount of time spent on those tasks with the intention of boosting efficiency, effectiveness, and output while, it requires juggling a person's numerous obligations from work, social activities, families, hobby, and other pursuits with the passing of time (Stella Cottrell, 2013). When time is managed well, an individual may spend their money or complete chores within their own leisure and convenience (Stella Cottrell, 2013).

Technology Use

Researcher might think about giving up on latent measures completely when technology usage is the main factor of interest because "using" is so obviously present (Ellis, 2020). Muda and Landau (2019) discovered that the variable of application of technology has a positive and substantial influence on the level of audit quality and accountancy operations. Workplace technology use may therefore effect on or enhance ergonomics (Kadir et al., 2019; Clegg, 2000), as well as psychological elements of occupations (Demerouti, 2020; Cascio and Montealgre, 2016). Person-related factors, in addition to task-related conditions, are likely to limit or spur technology adoption for individuals with the same employment. Individual choices to utilise or not use technology drive the latter (Davis, 1989; Venkatesh et al., 2003; Williams et al., 2015).

Entrepreneurship

The entrepreneurial phenomena of intrapreneurship serves as an essential sounding board for entrepreneurship definitions (Prince, Chapman and Cassey, 2021). Entrepreneurship is a verb, according to the definition provided, that is entrepreneurship is defined here as a multi-faceted activity encompassing a wide range of behaviours, connecting the proposed definition with the field's trajectory,

this definition also implies that being labelled an entrepreneur requires engagement (Prince, Chapman and Cassey, 2021).

Networking Skills

The skills necessary for maintaining social or professional contacts are known as networking skills while, networking are crucial ability in business expansion, sales, and many other professions, it need networking skills to produce and sustain having connections with new people and to enhance anything of value (Team, 2022). According to the website University of Cambridge Judge Business School (2022), one of the most important talents for business owners is networking and one that you can practise on programmes like Enterprise Tuesday (Enterprise Tuesday is a series of evening talks and panel discussions with tech pioneers, business leaders and experienced entrepreneurs). Furthermore, the meaning of the networking are "the method of generating, building, and maintaining a network of advantageous ties with other people (Claudia and Brock Smith, 2021). Networking is the ability to share ideas and information with people and organisations that share your interests while, for mutual benefit, you develop enduring relationships with others (Harappa, 2021). Networking skills are the traits or talents needed to maintain interpersonal connections while, they assist in making touch and creating a conduit for two-way communication (Harappa, 2021). Aside from skill development, networking should become a habit because it may expedite your professional development and career (Harappa, 2021).

Critical Thinking Skills

According to the website Washington State University (2020), critical thinking are an associated to issue solve, but it goes farther than that. Entrepreneurs, as critical thinkers, do more than only solve issues. They are the finest at problem solving. Here to highest standard possible, anyone can make rational and informed judgments by using critical thinking (Will Erstad, 2018). The capacity to interpret information rationally and reach a reasonable conclusion is referred to as critical thinking while, it entails analysing information from sources including facts, information, observable occurrences, and study results (Doyle, 2022).