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An Overview of Educational Awareness, Perception, and Preparation of Technical and Vocational (TVET) among Students and Alumni from B40 Families in the State of Perlis

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Abstract

Presently, every industry is calling for their workforce to develop new skill sets due to the dynamic of technological change. Every country must prepare its Technical and Vocational Education and Training (TVET) sector to provide the required skills in the new industrial development. Generally, TVET is a form of education that includes general education, technological ideas, and industry-related practical skills. It is a crucial component that creates future quality workers. It serves as a link between industry and education. Furthermore, research has demonstrated that TVET has various advantages. Therefore, it is vitally important to assess TVET academics' awareness and perceptions to ascertain how to prepare strategically and effectively to manage work-based learning. In this study, a qualitative approach, such as an in-depth interview, is employed to discover the awareness, perception, and preparation of the students and alumni from B40 families in Perlis on TVET.

Keywords: Technical and Vocational Education and Training, Awareness, Perception, Preparation, B40 Families.

Introduction

In general, Technical and Vocational Education and Training (TVET) include general education, technological ideas, and industry-related practical skills. It is a crucial component that creates future quality workers and links industry and education. Research has demonstrated that TVET has a variety of advantages. According to Akoojee and Hai (2018), TVET can assist the government in achieving the country's long-term objectives. It promotes the social and economic growth of our nation. Additionally, it teaches the student how to use the acquired abilities in their employment.

Malaysia is ranked 25th out of 64 nations in terms of infrastructure, economic development, business efficiency, and government effectiveness in the World Competitiveness Yearbook (WCY) for the year 2021. Focusing on technology and innovation that can boost productivity across a range of industries is essential if a nation rises to the top. As a result, having a trained workforce is considered essential for a nation to achieve high-income levels (Sani, 2018). It is

one of the efficient strategies to accomplish this and develop trained workers to meet the industrial need (Abdul-Aziz et al., 2020). Moreover, it is a method of education that emphasises general knowledge, competitive abilities, and attitudes (Wong & Atan, 2021). In the financial aspect, the Malaysian government has increased the budget allocation for TVET up to RM6 billion in Malaysia's 2021 budget, which has been boosted compared to the budget appropriation in 2019 (Rajaendram, 2020).

Although attempts have been made, it has been discovered that students today are less likely to enrol in TVET, resulting in a low number of TVET students below the market need (Aziz, 2019). Students' interest, parental influence, negative social perception, negative employer perception, the government's current policy, high education costs, inexperienced TVET instructors, and poor infrastructure in TVET institutions are just a few of the significant factors that have been identified impacting TVET's attractiveness (Abdul-Aziz et al., 2020; Hong et al., 2019; Wong & Atan, 2021).

Malaysia has been facing a shortage of skilled workers since its independence in 1957. Only 28% of the 12 million workforce in 2015 were skilled workers (Tenth Malaysia Plan 2011 – 2015), which increased to 31.5% in 2018. Meanwhile, the remaining 60.5% and 8% are semi-skilled workers and workers without any skills, respectively (Department of Statistics Malaysia, 2020). It is noted that Malaysia needs to produce 1.5 million skilled workers to fulfil the new jobs created by the year 2020. Unfortunately, there are only 7.3% of a total of 2,411,640 secondary school students enrolled in TVET programmes in 2017, as displayed in Figure 3. Statistics from the Department of Skills Development or *Jabatan Pembangunan Kemahiran (JPK)* (2017) further indicate that only 12,255 TVET students obtained *Sijil Kemahiran Malaysia (SKM)* levels 4 and 5 certifications in 2017. This is insufficient to support the demand for skilled workers.

Among the issues and challenges is the lack of qualified instructors in the field. The constraints instructors face are due to lack of exposure to teaching, lack of experience, and much work. This has caused instructors to lack various teaching methods to attract students' interest in learning. Other than that, vocational school instructors lack exposure to skills training, and instructors are advised to attend intensive training in the industry. Hence, the quality of students did not achieve the required standard by the industry due to weak teaching skills among the instructors. Furthermore, instructors in the TVET program lack experience working in the industry, which causes the delivery method in teaching to be based solely on the teaching content. Moreover, there is a noticeable absence of practical skills imparted in the field being taught.

TVET will play a significant role in the modernisation era. In anticipation of this development, the requisite skills for TVET are currently being prepared and developed in most countries, including Malaysia. In order to develop future TVET skills effectively, it is important to have a strategy that considers the awareness, perception, and readiness of TVET academicians. The diverse nature of TVET depends on variables of gender, study major, and job situations in relation to TVET academics and the types of schools in which they work. Therefore, the lack of information on these points in Malaysia leads to the following research questions:

- What factors contributed to awareness, perception, and preparedness can be explored in Malaysia Technical and Vocational Education and Training (TVET) students and alumni members?

- What factors influencing gender, major study, job nature, and school nature impact Malaysia Technical and Vocational Education and Training (TVET) students and alumni members?

Current Scenario TVET in Malaysia

It is essential to have knowledgeable people adept at handling cutting-edge technologies if a nation competes with other nations on the global stage. A country's ability to use technology effectively improves its economic performance and enhances its standing as a developed nation. The 11th Malaysia Plan (11MP) aspires to foster the next generation of innovators by having 35% of the workforce hold a diploma or higher-level certificate in the relevant field. In order to embrace the Fourth Industrial Revolution (IR 4.0) and Artificial Intelligence (AI) while addressing unprecedented technological development, TVET functions as a coordinating organisation to bring together multiple sectors into a unified system. The TVET institutions aim to produce a total of 1.3 million TVET graduates to meet the demands of the year 2020. In conjunction with this scenario, the Malaysian government aims to attract more students to enrol in TVET programs by allocating RM5.9 billion in Budget 2020. TVET's expanded significance and importance in the 11th and 12th Malaysia Plans reflect the increased attention given to TVET in recent years (2016-2020 and 2021-2025, respectively). Furthermore, the Ministries of Education, Higher Education, and Human Resources have frequently served as the public's faces for TVET-related issues for many years. Yet, a dozen other ministries and up to 20 government organisations have long had their own TVET programmes that they run separately and to various standards (such as capacity planning, recruitment and training, and curriculum development). The organisations range from the Ministry of Youth, Sports, Agriculture, and Food Industries to the Ministry of Works, Rural and Regional Development, as well as a plethora of sub-ministry bodies. This includes the Rubber Industry Smallholders Development Authority (RISDA) and the Council of Trust or *Majlis Amanah Rakyat (MARA)*. This is in addition to the hundreds of private TVET providers about whom very little information about their operations, performance, and standards has been gathered.

According to Kannan (2019), the Ministry of Education will focus more on TVET's financial issues to ensure a smooth operation. The ministry has put in place several strategies to achieve the objectives. The phrase "train and location" was first replaced with "place and train" by the government. Additionally, the ministry also creates joint ownership between the public and private sectors. In order to achieve excellence and introduce TVET's Valued Industrial Partner (VIP), the government established the Centre of Excellence (CoE). Other government initiatives include creating careers with a set wage and creating Industry-led Competence Certification Bodies through industrial experts.

Methodology

This paper has reviewed some previous studies (2013 to 2021). The factors that affect TVET's attractiveness are listed:

i. Students awareness
ii. Students' and parents' perceptions
iii. Academicians (instructors) and institution preparations

This study used a qualitative research approach to explore the factors among TVET students and alumni regarding awareness, perception, and preparedness. This method has been used

by Hashim et al. (2009), who conducted studies on small and medium entrepreneurs. Population and sample will be selected from TVET students and alumni. Data will be collected through semi-structured interviews using the interview protocol developed based on the literature review. Note that the interview protocol consisted of three sections. Part A on TVET awareness with five open-ended questions. Part B on TVET perception contains seven open-ended questions, and finally, Part C is about preparedness with seven open questions. This question serves as a guideline for the interview. These dimensions in the interview protocol were based on the awareness, perception, and preparation of TVET students, teachers, and managers for IR 4.0 in Myanmar (Tun et al., 2021).

The data will be collected by the researchers. Participants will be asked to answer the interview questions, and the interview data will be recorded by the researcher. The semi-structured interview protocol serves as a guide for researchers. The data will be analysed by thematic analysis according to the study's variables.

Student Awareness

The main factor that motivated students to pursue TVET was student awareness (Abdul-Aziz et al., 2020; Hong et al., 2019). Students were more likely to enrol in TVET to obtain the skills when they had a strong interest in working in a job connected to their field of study. The decision made by the students to enrol in a vocational training programme may be influenced by their awareness of TVET. Hence, the decision to enrol in such a programme is the portrayal of vocational training. With their values, parents and school authorities may frequently persuade a person to choose vocational training (Agodini et al., 2009). Consequently, Ismail et al. (2018) and Omar et al. (2018) made the case that various factors, including intrinsic, extrinsic, and altruistic incentives, impact students and teachers' decisions to pursue careers as TVET instructors in Malaysia.

Making the right decision might motivate them to work and produce more. Some students exhibit their sensitivity and imagination in novel and imaginative ways. Determining a student's vocational talent in light of their interests is crucial. Unfortunately, teachers at the institution hardly ever recognise kids with great vocational aptitudes. This is due to the fact that professors tend to focus exclusively on students who have strong academic backgrounds. On the other hand, pupils with occupational talent do not receive much attention from their teachers, which results in their potential being buried.

Students and Parents' Perceptions

Social perception is another element. It was a prevalent belief in society that TVET students had bad academic performance. According to research (Abdul-Aziz et al., 2020; Chan, 2018; Omar et al., 2020), it was discovered that in many cases, poor social perceptions would cause students to lose interest since they did not want to be perceived as having low academic achievement. Sadly, social perception also affects how parents perceive their children. This was due to the fact that parents' perceptions were crucial as students frequently considered their parents' counsel and guidance when making decisions (Hussin et al., 2017; Koya, 2019). This always occurs when employers do not value TVET credentials due to bad social behaviour (Chan, 2018; Cheong & Lee, 2016). Thus, parents play an important role in the academic achievement of their children. In fact, parents are the closest people to their children; in this sense, children's education depends on the parents.

According to Listyaningrum et al. (2020), the involvement of parents is needed in assisting children from an early age by providing a conducive environment at home, learning

experiences, and support, as well as demonstrating a good attitude towards their children. Rahman et al. (2021) supported that the more parents spend more than two hours per day on their children's education, the more they achieve high academic performance.

Academician (Instructor) and Institution Preparations

There is a wealth of information available on TVET education, and numerous studies have sought to examine why students choose TVET in various national contexts. Several academicians used a range of tools, procedures, and techniques to identify the variables that should be studied in different research fields. Yet, limited studies have examined how informational techniques and students' knowledge, interest, and motivation in the TVET sector interact. One of the main goals of TVET students is to engage in teaching strategies that emphasise tasks and activities related to the workplace. In order to better understand the learning content, TVET students are more likely to be visual learners who like to learn with the aid of illustrations, flowcharts, diagrams, and demonstrations.

To facilitate the preparation of TVET students, it is crucial to ensure their Internet access while promoting student engagement in e-learning through the active involvement of TVET institutions. This facility needs to be highlighted as one of the crucial internet networks, such as a Local Area Network (LAN) or Wide Area Network (WAN), to transmit content and interact with it (Wan Hassan et al., 2020). The management of TVET colleges must improve in having appealing hostel and college facilities in order to solve the internet connectivity issue among instructors and students. Students will not drop out as a result, and e-learning will be more successful for pupils. Moreover, TVET institutions could create new opportunities by investing in learning science, staff training, and establishing digital infrastructure to update and grow technology infrastructure for digital pedagogy.

Moreover, TVET universities should offer quality web-based tools or cost-free learning platforms to minimise disruptions in online learning. Given the difficulty in finding materials online for TVET, in the Malaysian context, an online platform such as Google Classroom is used as a main medium to teach and communicate with the students (Abdul Razak et al., 2022). Hence, TVET colleges are advised to create their own e-campus to host and manage online instruction for teachers and students. The administration, documenting, tracking, reporting, and delivery of educational, training, learning, and development programmes are all managed by an online Learning Management System (LMS), which functions as an application. To make the most of instructional technology in TVET programmes, technical support should be combined with professional help. Expertise can provide various programs, such as Information and Communication Technology (ICT) courses, for instructors to boost their skills in ICT and technology for online learning purposes (Amran & Yahya, 2020).

The e-learning demand should be considered while revising TVET institutions' curricula, pedagogy, learning resources, and assessments. Prior to providing their LMS with the proper information to encourage learning among students, TVET colleges should be prepared to create comprehensive and well-structured lesson plans. Krishnan (2020) asserts that TVET colleges can effectively utilise online learning by implementing courses comprising 70% practical and 30% theoretical components. Moreover, e-learning enables skill-training organisations to adjust to the evaluation of students by outside examiners. As a result, the providers must discuss the assessment and accreditation processes that can adjust to the new typical circumstances without compromising protocols and systems (Majumdar & Araiztegui, 2020).

To encourage students' interest in learning, instructors can develop interactive Teaching and Learning (T&L), like gamification through quizzes, social and collaborative learning, and more (Talib et al., 2017). In particular, in education, this method enables students to communicate effectively and increase their knowledge in an open forum (Bączek et al., 2021). Additionally, online conversation can be used with Problem-Based Learning (PBL) to improve collaborative group work. According to Okolie et al. (2021), incorporating PBL into TVET education encourages students to learn actively, ask questions, and engage in in-depth study at their own speed. From that discussion, students can link what they have learned with the previous problem, and instructors can also identify the cognitive development of the topics (Khalid & Quick, 2016).

Conclusion

From the variables of awareness, perception, and preparation that need to be made among TVET students and alumni, a survey will be created through the interview method. Some students and alumni will be selected to answer the interview, consisting of three main parts. Questions have been identified to achieve the objectives of the study. This study is a qualitative method to discover factors such as awareness, perception, and preparation of TVET in the State of Perlis. These data will be analysed using thematic analysis that will help improve TVET.

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