CHANGING IN TVET: CHALLENGES AND OPPORTUNITIES IN SABAH'S HEI

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Abstract

Innovation in technical and vocational education and training (TVET) is frequently changing. We are continually challenged to develop a more sustainable future in this ever-changing world. However, innovation is critically dependent on leading organizations and societies. Some of the TVET Higher Education Institutions (HEI) are still left behind compare with other HEI in developed countries. Some HEI thought that changing TVET was such a burden for them to change their teaching and learning system. This study applies the qualitative approach, and a semi-structured interview was applied to ensure the appropriate data was collected. This study tries to understand the perception of HEI towards changes in TVET. This study also explores the challenges and potential opportunities of the change in TVET towards Sabah's HEI. There are seven higher education interviewed and the majority of the informants perceived that changes in TVET create a positive view toward Sabah's HEI. Six major challenges were highlighted by the informants and five potential opportunities were mentioned by the informants. This study has highlighted TVET challenges and opportunities that need to be tackled through industry experts' perspectives. Their experience of accommodating TVET students and graduates as interns and employees will help to produce better-quality graduates in the future. Essentially, collaboration with industry is not just about providing employment opportunities but is a key factor in providing quality skilled workers. The changes in TVET are not an obstacle to Sabah's HEI instead an opportunity for the HEI to improve and enhance the quality of the teaching and learning process.

Keywords: TVET, HEI, Education, challenges & opportunities

Introduction

Many changes are taking place in technical vocational education and training, many of which are shared with other education sectors and some of which are shared with other social services. Some of these changes appear to be the outcome of broader societal and organizational changes, such as the spread of new technology and globalization.

Vocational education can promote tolerance, minimize racism, and promote the formation of a more inclusive society and acceptance of the change. Because vocational education enrolls a bigger proportion of students from disadvantaged backgrounds than higher education, it has a greater potential to enhance the lives of society's most vulnerable members.

In higher and upper-middle-income nations, vocational education accounts for a larger part of total education. This could be due to the economic structure of those countries that require a higher proportion of graduates with vocational education. However, this may reflect the reality that vocational education requires more resources than academic and general education. To protect the safety of students and the equipment they use, vocational education requires more expensive equipment and facilities, more practical sessions, and more staff per student.

The development of vocational education for the informal economy is a specific problem. Every country has an informal sector. The informal economy employs about 15% of the workforce in affluent economies, 50% to 70% in underdeveloped ones, and 90% if agriculture is included. Much of the

employment in the informal economy is skilled, although the majority of skills are obtained through non-formal vocational education or informally, such as traditional apprentices.

For TVET to achieve Vision 2020 and the Malaysian Education Development Plan 2013–2025, several challenges still need to be resolved. The Ministry of Education observed in 2012 that Malaysia's TVET faces difficulties beyond developing enough good human capital. Also, it is crucial to provide 1.6 million people with TVET who are qualified for the labor market to help the nation realize its objective for 2020.

Background and Problem

The desire of students to enroll in TVET programs may be influenced by a variety of variables. Three factors, including intrinsic, extrinsic, and altruistic incentives, affect students to pick a TVET program as their career among Malaysians, according to Omar et al. (2020). Many perceptions have grown towards technical education as TVET education, especially for low-income students, school dropouts, and low grades students.

Omar et al. (2020) also backed the idea that TVET programs are second choices to higher education for students in lower grades and with weak socioeconomic backgrounds. Even though the government has created numerous initiatives for TVET students, parents, and students tend to place a greater emphasis on university education than TVET education. Moreover, an interview with parents and students also highlighted the low interest and enrolment in TVET due to the lack of awareness of the vocational pathway and career opportunities (Ministry of Education Malaysia, 2013).

According to a study by Hanapi et al. (2015), the unemployment of vocational and technical students in Malaysia was caused by inept teachers who lacked industrial experience and were uninterested in teaching the given courses. Despite this, the study by Ismail et al. (2018) indicated that vocational teachers had trouble attending professional development programs to improve their knowledge, abilities, and professionalism because of a constrained budget, a rotation system, and a significant amount of work.

Implementing online learning across the TVET courses may be hampered by the lack of appropriate learning tools. Although students are committed to using MOOCs, the study by Zulkifli et al. (2020) claims that the biggest barrier to using Massive Open Online Courses (MOOCs) among students at polytechnics in Malaysia is internet coverage. The biggest obstacles to implementing online learning for TVET, according to Yasak and Alias (2015), include concerns with management, economics, and policy, as well as technological, infrastructure, and human resource development.

According to Osman et al. (2008), industrial training made Malaysian university and polytechnic students feel more confident in their capacity to study and perform vocational-related tasks. Industry training provided them with "real-life experience" (ibid.) that they could apply to academic information gained at universities or polytechnics. As expected, industrial training appears to increase students' soft skills.

From the standpoint of industry, TVET challenges are more difficult to identify. Knowing how the industry perceives TVET in Malaysia can assist skill institutes in preparing their students for the demands of industrial placements. Students will be better prepared for employment if they are aware of the concerns or obstacles that the industry may anticipate (Annika, 2013).

Objectives

The objective of this paper is to discuss the challenges and opportunities that arise in TVET implementation in Malaysia. This issue is repeatedly reported on many platforms but infrequently done in an academic manner. Furthermore, the perception of the informants is crucial to determine the pathway of Sabah's HEI in achieving success in TVET implementation. The group of informants selected can provide the right information that could help in achieving the objectives of the study.

Methodology

The procedure of gathering data for this study employed a qualitative approach to produce research findings. When examining a social topic, Creswell (2012) describes qualitative research as a process of inquiry into the direction of understanding based on the data-gathering techniques employed. To comprehend the background of diverse institutions through the experiences of the professionals involved in teaching interns and recent graduates, this study adopts an interpretive qualitative technique and an inductive approach. To gather information on industry professionals' observations, knowledge, experience, and opinions on TVET challenges and prospects in Malaysia, semi-structured interviews and focus groups with experts in the field were conducted. Merriam and Tisdell (2015) claim that the experts' varied backgrounds and expertise would offer insightful information on the need to raise educational standards.

Data Analysis

The information gathered from the interviews was assessed using thematic analysis. To determine the challenges and opportunities that TVET in Malaysia is now facing, as well as recommendations and prospective solutions, all of the interviews were transcribed and coded. Before researchers started gathering, coding, and categorizing the data to derive the study's theme, respondents were asked to confirm the transcripts. After that, data were categorized in line with the developing theme.

Participants

The participants involved in this study were experts from the institutions and industries in Malaysia and were identified based on the following criteria:

- A minimum of 5 years of working experience in a particular institution/industry
- In possession of a diploma or degree or professional certification in related institutions/industry
- Experience in teaching/supervising students or interns

Findings 1

Technical and Vocational Education and Training (TVET) in Malaysia is not new. As expected, the investigation of the main issues of TVET in Malaysia is similar to other countries. To answer the first objective of this study, the majority of the informants perceived that TVET in Sabah is still in the development process. this is because there are still many aspects that should be improved and upgraded. Technology, knowledge, collaboration, and attitude are the main aspects highlighted by the informants towards Sabah's TVET. However, the majority of the informants perceived that Sabah's HEI still has opportunities to improve.

Findings 2

There is a total of six main challenges after the data analysis and data clustering process. Table 1.1 shows the challenges and opportunities obtained from the data analysis.

No	Challenges	Free
1	Technology	16
2	Knowledge	14
3	Attitude	14
4	Industry	12
5	Management	10
6	Parental	7

The first and most repeated challenge mentioned by informants is technology. The majority of the informants mentioned that technology is the most important challenge for Sabah's HEI. According to a previous study, the technology of Sabah's institutions/industries still leave behind in peninsular Malaysia. According to (Zainab, et. al, 2019) Sabah's industries are still in between IR2.0 and IR3.0. most industries still use the traditional process method in the industries. Only 3.0% of industries go beyond digitalization to increase productivity.

The second challenge is knowledge. HEI's educators and trainers lack of knowledge in TVET. One of the informants mentioned that most of the educators and trainers in the HEI lack knowledge of TVET interpretation. This is because some of them are fresh graduates from higher education and lack working experience in the industry.

Attitude is a part of the challenge in Sabah's HEI. Students should equip themselves with the TVET system when they choose to further their education in the TVET industry. They have to realize that TVET works to develop and equip individuals with current technical skills based on industry demand and the industry set high expectations for this matter. However, the majority of the students failed to perform as industry experts and were not interested to perform as semi-professional workers in the industries.

To achieve success in TVET institutions for Sabah's HEI, the industry plays an important role in collaboration with the HEI. The industry is always a part of the practical/hands-on for the students from the TVET institution. Part of the academic knowledge has been taught in the institutions and the practical part will realize in the industry. However, the majority of the industry in Sabah is still in the IR2.0 and IR4.0. they can't provide an intensive and effective learning environment to the students. The majority of industries in Sabah still apply traditional and outdated technology. Students would not able to learn the latest technology as what they learned from the institution.

The institution's management is also a part of the TVET challenges. The management should change its mindset to invite more speakers and tutors from other institutions and industries. Different countries have different knowledge and perception towards particular subjects. The students need to learn more and extra knowledge during their learning process. one of the informants mentioned that "Singapore and Germany have modern and updated technologies compared with Malaysia, we should learn more from them. We can get more information and idea from them in particular topics to enhance our knowledge".

Parental as well as parent attitude is a part of Sabah's HEI challenge. the parents and students are more focused on university education rather than TVET education. Moreover, an interview with parents and students also highlighted the low interest and enrolment in TVET due to the lack of awareness of the vocational pathway and career opportunities. most parents' influence will affect their choices in higher education. parents' educational background determines their children's education. They reported that low parents' educational backgrounds prefer university education for their children rather than TVET education for their benefit and status.

Findings 3

There are five opportunities after the data analysis and data clustering process. Table 1.1 shows the challenges and opportunities obtained from the data.

No	Opportunities	Free
1	Collaboration	9
2	Competence	9
3	Re-brand	8
4	Technology	6
5	Soft skills	5

In Malaysia, many types of partnerships exist between skill institutes and industry, allowing students to be tied to industries. Job training is included as part of the pre-employment skills development process in placements. Furthermore, all technical undergraduates in Malaysian universities and polytechnics must complete 3 to 6 months of industry training. As a result, industry support for job training for TVET graduates is critical to guaranteeing their employability. A wide range of companies must create chances for undergraduates to receive work training. Industries are supposed to give them appropriate assignments throughout employment training that both prepare them for work and offer future learning. Students are expected to enhance their technical and soft skills.

Qualified TVET instructors must demonstrate professionalism, knowledge, skill, a vast social network, and a positive attitude. TVET teachers in Malaysia are primarily concerned with organizing, administering, developing, delivering, and assessing educational curricula. They are also concerned with education, training, and learning. They are also expected to monitor students' development while conducting research and innovation. According to the findings of industry experts, a primary TVET concern is regarded to be the credentials of the teaching personnel. TVET instructors should be competent in areas other than their core field, such as administration and teaching approaches.

MOHE and affiliated agencies needed to rebrand the stream to change parents' perceptions of TVET as a second-rate or unimportant education. Many parents have a poor image of TVET, believing that it is second-class or solely for dropouts. As compared to countries such as Germany and France, however, this education path is the most popular.

Further packages, such as computer literacy and technological skills, are required for TVET graduates. Graduates must master these abilities to remain marketable. Additional soft skills related to technical communication may need to be improved. TVET graduates should be computer literate and capable of data entry, data management, and other operations. These abilities are related to technical communication and are required for jobs such as correct reporting and communication. The majority of

new TVET graduates lack computer and data management abilities. Computer courses for TVET students are in high demand.

According to the informants, TVET graduates have strong technical skills. However, lack effective communication skills, particularly when interacting with consumers or clients. Aside from informal communication, TVET graduates must also be able to communicate professionally, such as through presentations.

Discussion

This study has highlighted TVET challenges and opportunities that need to be tackled through industry experts' perspectives. Their experience of accommodating TVET students and graduates as interns and employees will help to produce better-quality graduates in the future. Essentially, collaboration with industry is not just about providing employment opportunities but is a key factor in providing quality skilled workers. To achieve an effective and competitive TVET ecosystem, industry involvement in addressing the real issues and challenges of TVET in Malaysia is imperative.

To conclude, the governance of TVET in Malaysia HEI should plan several strategies to strengthen the TVET system, especially in Sabah. Subsequently, TVET institutions must work closely together with industries by implementing attachment programs such as traineeships and training the trainers to develop graduates' soft skills whilst enhancing the competencies of teaching staff in strategic industry collaborations.

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