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The issues and challenges of TVET in Malaysia: from the perspective of industry experts

Abstract

In Malaysia, industries are an integral part of the TVET (Technical Vocational Education and Training) ecosystem that develops competent graduates who benefit the nation and industry. It is vitally important to understand industry’s perspective of TVET issues in Malaysia, as this will help policymakers to plan effective strategies for competitive TVET. The question is: What are the main issues and challenges facing TVET in Malaysia? A series of in-depth interviews involving 6 industry panels was conducted to investigate the issues and challenges of TVET in Malaysia and to come up with suggestions for improvement. The findings identified the main issues and challenges in Malaysia as being the governance of TVET, soft skills of graduates, competencies of teaching staff and perceptions towards TVET. Results, presented qualitatively, suggested that strategic industry collaboration, harmonious TVET governance, improving the qualifications of the teaching staff, refining the competency assessment system and TVET promotional programmes could improve the TVET sector in Malaysia. Strategic plans and reforms can thus be effectively introduced for future skills development in order to meet the needs of industry, thereby contributing to the development of the nation.

Keywords: *technical vocational education and training (TVET), TVET governance, TVET graduates, TVET teaching staff, perceptions towards TVET*

1 Introduction

As a developing country, Malaysia is actively empowering the TVET system to meet the needs of various industries. However, Malaysia still faces challenges in establishing TVET as the main option for education in the country. According to Noorazman et al. (2017), there are still many issues that need to be addressed in TVET towards achieving Vision 2020 and the Malaysian Education Development Plan 2013-2025. In 2012, the Ministry of Education noted that the challenge of Malaysia’s TVET goes beyond producing quality human capital in sufficient numbers. It is also important to achieve the country's vision in 2020 by providing 1.6 million people qualified for the labour market through TVET. According to Ramlee (2017) issues related to TVET include: negative perception of TVET, governance body, TVET framework, competency of teaching staff, job mismatch, not driven by industry, limited allocation and uncompetitive salary for TVET graduates.

To ensure that Malaysia implements TVET effectively, the ministry that administers TVET needs to create a sustainable ecosystem in tandem with industry. The success of the TVET

ecosystem depends on close cooperation and industry-driven initiatives, encompassing technology and knowledge sharing, practical experience, intensive training of instructors and industrial training of students (Aminuddin 2011). At the same time, skills institutions and industry need to align common goals, based on sharing knowledge, learning and intensifying collaboration. The success of this collaboration depends on the strategic and tactical approaches made by skills institutions and industry as joint venture partners (Ashari & Rasul 2014).

There is no doubt that a collaborative network of skills institutions and industries will need to demonstrate that it is of mutual benefit. Various programmes can result in a win-win situation for both parties, such as research or research studies, staff participation, student training, student placement and other relevant forms of collaboration (Liew et al. 2012). A more efficient TVET ecosystem must involve industry to a significant extent.

2 The Need for Industry Collaboration

In Malaysia, there are various kinds of collaboration between skills institutions and industries which permits students to be attached to industries. Placements include job training as part of the pre-employment skills development process. Furthermore, all technical undergraduates in universities and polytechnics in Malaysia have to undergo 3 to 6 months of industrial training. Hence, industry support in providing job training to TVET graduates is crucial to ensuring their employability.

According to Alias and Hassan (2013), in 2010 alone, 5,000 companies trained up 7,800 community college students. A large number of industries need to open up opportunities to provide job training for undergraduates. During job training, industries are expected to provide them with suitable tasks, which prepare them for work as well as offering future learning. Anticipated outcomes for students are improved technical skills and soft skills.

In previous research conducted by Osman et al. (2008), universities and polytechnics students in Malaysia revealed that industrial training made them feel more confident in their ability to learn and undertake vocational-related tasks. Training in industry gave them “real-life experience” (ibid.) they could link to the theoretical knowledge acquired in universities or polytechnics. Industrial training really does seem to improve students’ soft skills as expected.

Challenges related to TVET from the perspective of industry are less easy to determine. Understanding how industry sees TVET in Malaysia will help skills institutions to prepare their students for the demands of industrial placements. Awareness of the issues or problems that industry might anticipate will help students to be better prepared for employment. As such, this paper aims to investigate industry’s observations with regard to TVET in Malaysia. The research question is: what are the main issues or challenges of TVET in Malaysia?

3 Methodology

This study will use qualitative methodology in the process of obtaining input to be used as research findings. Creswell (2012) defines qualitative research as a process of inquiry into the direction of understanding based on the data collection methods used when reviewing a social problem. This study employs an interpretive qualitative approach and uses an inductive approach to understand the context of various industries from the experiences of the experts involved in training interns and fresh graduates. Data has been collected through in-depth interviews and social interactions with industry experts to determine their observations, knowledge, experience and opinions on TVET issues and challenges in Malaysia. According to Merriam and Tisdell (2015), the experts' range of experience and knowledge would provide rich insights into the need to improve the quality of education.

3.1 Participants

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

1. A minimum of 10 years working experience in a particular industry
2. In possession of a diploma or degree or professional certification in related industry
3. Experience of supervising interns or fresh graduates

3.2 Instruments

Semi-structured interview protocols were constructed to guide the in-depth sessions with industry experts. According to Montoya (2016), questions in a semi-structured interview allow participants to respond flexibly. The largest part of the interview was guided by a list of questions related to TVET issues and challenges in Malaysia. Neither the exact wording nor the sequence of the questions was determined ahead of time. This format, according to Montoya (2016), allows the researcher to respond to views as they evolve during the course of an interview, giving space for new ideas on the topics discussed. At the same time, it gives the researcher scope to construct new questions spontaneously to ensure the richness of the data. Interview protocols were validated by two experts with PhD qualifications; educational policy and education management at higher learning institutions.

3.3 Data Collection Procedure

Participants in this study were identified by the human resources departments of their respective organizations based on the criteria as suggested. All six participants were then contacted via email to arrange one-to-one interviews through Google Meet. With their consent, all of the interviews were recorded. Semi-structured interview protocols were used as a reference to guide the process of the interview sessions and ensure that participants provided unbiased and independent opinions.

3.4 Data Analysis

Thematic analysis was used to evaluate the data gleaned from interviews. All of the interviews were transcribed and coded to identify the main issues and challenges facing TVET in Malaysia, along with suggestions and potential solutions. Respondents were asked to verify the transcripts before researchers began compiling, coding and categorising the data to obtain the theme of the study. Data was then categorised according to the emerging theme.

Having processed all of the data and identified the emergent themes, researchers prepared a set of expert consent forms. Cohen (1960) has introduced a method for determining the reliability of qualitative data in the form of interviews in which the procedure indicates that there are two (or more) evaluators independently categorising unit samples and determining the level, importance, and stability of their consent sampling. The Cohen Kappa Index analysis was performed to find the degree of alignment of the analysis unit with the constructed theme. In this study, three qualitative experts in the field of TVET were appointed to be the evaluators of the constructed themes.

4 Findings

In investigating the main issues of TVET in Malaysia, four themes emerged from the data: (i) the governance of TVET, (ii) graduates' soft-skills (iii) the competencies of teaching staff (iv) perception towards TVET.

4.1 Profile of Participants

Six industry experts, each from a different specialist field, were interviewed, three from international companies and three from local ones. All experts had at least five years of experience supervising fresh graduates and interns. Four of the experts had previously participated in TVET town hall sessions on several occasions., Pseudonyms were used to safeguard participants' anonymity.

Table 1: **Profile of Industry Experts**

Pseudonyms	Company	Sector	Years of Experience	Position
Suria	A	Beauty and Spa therapy	15	Managing Director
Mohamed	B	Heating, Ventilation, and Air Conditioning (HVAC)	34	Senior Manager, Dept. Of Research and Development (R&D)
Naim	C	Hospitality and Culinary	11	Sous Chef
Saiful	D	Fashion Technology	31	Managing Director

Hazwan	E	Automotive	10	Technician Supervisor
Faiz	F	Electrical and Electronics (E&E)	13	Project Supervisor

4.2 Governance of TVET

The governance of TVET was one of the themes to emerge from the interviews with the experts. With eight ministries administering TVET in Malaysia, resources are not deployed as effectively as they might be. Furthermore, different certifications also pose a problem to determining the standard of TVET graduates.

4.2.1 Ministry Administering TVET

Uncoordinated TVET governance is the biggest problem in Malaysian TVET programmes. This is due to the fact that different ministries implement TVET for various levels of education. The problem is exacerbated when there are no major ministries administering TVET. For instance:

“I think we have a problem in terms of TVET coordination. Who is actually administering TVET now? The Ministry of Education and the Ministry of Human Resources both claim to do so. This is very confusing.” (Mr. Hazwan)

The involvement of multiple ministries in TVET is problematic, as the same courses are on offer, but with different certifications and accreditations. Mr. Mohamed noted a similar problem:

“If we look at Malaysia, there are seven or eight Ministries administering TVET. The two largest are the Ministry of Education and the Ministry of Human Resources. The problem that arises from this situation is that, not only is there variation in certification for the same courses, but almost all of these ministries offer the same skills courses.” (Mr. Mohamed)

Mr. Mohamed added that he did not see any specific ministry with overall responsibility for TVET:

“When there are too many ministries running TVET, there are too many certifications. I see no single entity or ministry that specifically runs TVET in Malaysia.” (Mr. Mohamed)

Additionally, this overlap of governing ministries has left the direction of TVET blurred:

“I can see overlap and unclear division of responsibilities due to the involvement of several ministries in the delivery of TVET programmes in

this country. So our TVET cannot move forward... we are stuck here. TVET needs to be led by one ministry.” (Mr. Faiz)

The problem of too many ministries administering TVET has also led to inefficient management of resources. This is true of financial resources and expertise, for example:

“When there are too many TVET institutions offering the same courses, I can see that government cannot provide the best equipment due to limited financial resources. They can't train all of the instructors up to professional levels. So, the current number of expert instructors cannot be accommodated to all institutions.” (Mrs Suria)

4.2.2 Accreditation Body and Certification of TVET

Accreditation bodies that recognise TVET certification in Malaysia are also seen as uncoordinated with the existence of two accreditation bodies, namely the Malaysian Qualifications Agency (MQA) and the Department of Skills Development (DSD). Although the courses offered are the same, there are differences in certification accreditation for the courses because the TVET institutions are under different ministries:

“I think TVET certification is a bit chaotic. There is TVET certification under MQA, and also under DSD. Here at Community College, the certification is under MQA. But many other colleges offer similar courses with certification from DSD.” (Mr. Saiful)

When there are differences in accreditation, issues related to TVET standards also arise. One participant expressed disappointment in being unable to see a bright future for TVET due to these discrepancies in accreditation:

“I see a lot of institutes that run TVET in Malaysia. Polytechnics, ILP, IKBN, Mara College, community college, vocational college, private institutions, they all run TVET... running the same courses. That doesn't mean they can't do TVET, but we have to coordinate all this. When there are too many, we don't even know how to set TVET standards. The institutes I mentioned, they are all under different ministries. So where do we really want to take our TVET?” (Mr. Naim)

Duplication of TVET courses and programmes was also seen as a challenge to the TVET system. Focused TVET institutions would improve the TVET system in Malaysia:

“Malaysia is facing the following challenge to the TVET system which is... duplication of TVET programmes offered by several ministries, with little differentiation and sometimes with no difference at all! I wonder if a TVET institution can run a particular course. There must be more focus to produce the best product.” (Mr. Faiz)

4.3 Graduates' Soft-skills

TVET graduates' competencies need to be balanced between technical skills and soft skills. Both are benchmarks of graduates' marketability to the world of work. However, there are several issues related to these soft skills, including social and communication skills, technology skills, teamwork and leadership.

4.3.1 Social and Communication Skills

According to the participants, TVET graduates have good technical skills. However, they lack good communication skills, especially when dealing with customers or clients:

“These TVET students... I see that they are only taught hard skills. Their ability to interact, to communicate is very weak. For me, their technical competency is acceptable, but when they are interacting with the boss or with customers, their communication skills (and public relations)... are weak, their body language is inappropriate. You can't play with your mobile phone when you go for lunch with clients!” (Mr. Hazwan)

Aside from academic qualifications, industry respondents expect their employees to have good social skills and to be able to mingle well with others:

“We need our employees to be more than good academics. We want them to have good social skills, to be able to carry themselves, mix with other people, and get along well.” (Mr. Mohamed)

Apart from communicating informally, the ability to communicate formally such as making presentations is also a skill that TVET graduates need:

“Some TVET graduates lack (oral) presentation skills, they just read what is written on screen. We want them to be able to deliver information effectively.” (Mrs Suria)

4.3.2 Technology Skills

In addition to skills in their respective fields, TVET graduates need to have additional packages such as computer literacy and technology skills. Graduates need to master these skills in order to make themselves relevant to the market:

“Now is the age of technology. Much of our equipment is advanced and digitalised, requiring technological skills. Sometimes we have to do programming, so we need all those skills.” (Mr. Faiz)

There are other soft skills which may need to be developed relating to technical communications. TVET graduates are expected to have good computer literacy, to be capable of data entry, data management and other processes:

“TVET students must have extra skills, especially computer skills. These computer skills are necessary for documentation, recording and filing. We sometimes need to use computers to control production systems. The ability to use multiple applications is also necessary.” (Mr. Mohamed)

These skills are related to technical communication and are necessary for tasks such as reporting and communicating accurately. Most new TVET graduates lack technological skills in computers and data management. There is a need for computer courses for TVET students.

“We have to admit that many TVET graduates are very weak in the use of computers. They are not even capable of using basic Office Windows. They need computer classes to prepare them for entering the workplace.” (Mrs Suria)

4.3.3 Teamwork

Teamwork was an emergent theme from the data. The industry experts considered communications within the team as essential in order to achieve company goals. Failing to convey exact messages to their team might slow down productivity and increase miscommunication. Therefore, each employee is accountable to other team members:

“Teamwork is very important in achieving set goals. I think the college should create a special syllabus or module to improve the communication skills of TVET graduates. It’s crucial to have good teamwork while working with us. They need to learn how to work in groups effectively.”(Mr. Hazwan)

As departments or units are interconnected, team communication in their regular jobs is seen as vital by all of the experts. The team ethic presents a challenge to most TVET graduates:

“In the HVAC industry, teamwork is very important. If you prefer working individually, this industry is not for you. I want TVET graduates who enter the industry to be able to communicate as a group. We can't accept losses just because there are team members who can't work together.” (Mr. Mohamed)

Teamwork is especially important to achieve common goals in the hospitality field:

“From what I see, communication skills are very important. This includes strong teamwork. Industries like ours need strong communication to achieve daily targets. Teamwork is a priority in the hospitality and culinary fields.” (Mr. Naim)

4.3.4 Leadership Skills

Leadership skills are significant in preparing graduates for employability. This is another theme to emerge from the analysis. For instance, technicians, mechanics or foremen in the

automotive industry will not remain in the same position until the end of their careers. As their years of service increase, they gain more experience, explore different areas and can be promoted to higher levels:

“I see a lot of intern TVET students here who are quite introverted. They don’t want to stand out. As they become more senior, they may have the opportunity to be promoted, but only if they have developed good leadership skills. Everyone starts at the bottom, but it shouldn’t end there.”(Mr. Hazwan)

Career advancement opportunities in the industry are open to those with leadership qualities. Therefore, industry expects TVET graduates to have the ability to lead a team in order to achieve company goals.

“Industry definitely needs great teamwork. We need to work together. But how do we have a great team? It is because we have a great leader who can solve problems immediately and work smartly as a team. Being a great industry worker requires not only technical skills, but essential leadership skills. Most fresh graduates do not yet have these leadership skills. But I am sure it can be taught indirectly during the course of their studies. It will benefit them in the future.” (Mr. Faiz)

4.4 The competencies of teaching staff

Competent TVET teaching staff need to demonstrate professionalism, be knowledgeable, skilled, have a wide social network, and have a good personality. In Malaysia, TVET instructors are primarily concerned with teaching, learning and training, as well as the organisation, management, development, delivery and assessment of the educational curriculum (Ismail et al. 2018). It was noted that TVET educators in this country are often engaged in providing input on training courses. They are also expected to be involved in research and innovation while monitoring students’ progress. Meanwhile, the findings from the industry experts showed that the competencies of teaching staff is considered a major TVET problem. The competency of TVET teaching staff should extend beyond their own field to include other skills such as teaching methods and management skills.

4.4.1 Technical Skills

Skilled instructors in their respective fields are the most important asset in the success of the TVET agenda in Malaysia. According to Ismail et al. (2018), technical skills and innovation components are crucial parts of TVET training which focuses on the specifics occupational area of the TVET Educator. As educators experience theoretical and practical sessions in diverse ways, the emphasis on technical aspect is vital. TVET teaching staff are thus required to possess technical qualifications up to a professional level and be competent in industry practices. However, there are some issues related to the competency of the teaching staff:

“The competency of teaching staff is among the problems that can be seen. Teaching staff must be competent in terms of technical skills, teaching skills and management skills. They must be qualified to teach and recognised as professionals. They must be capable of troubleshooting and fixing problems as practised in industry. But we have strong doubts about this.” (Mr. Mohamed)

“There is a competency problem related to the skills of TVET instructors. Okay, when we talk about teaching staff, they should be hands-on... but most of them are not. Not all, but most of them, only know and teach what is in the book.” (Mr. Naim)

4.4.2 Teaching Methods

The competency of teaching staff also implies that they are able to convey technical knowledge to students efficiently. Ismail et al. (2018) define teaching, learning and training components of TVET educators in Malaysia as the pedagogical and subject-based methodological knowledge and skills according to the requirements of the professional and accreditation bodies. This requires a comprehensive understanding of instructive and methodological tools which meet the particular teaching circumstances according to the requirements of the core curriculum. Therefore, TVET teaching staff should have certified qualifications to teach and deploy methods which are both compelling and effective, ensuring that learning objectives can be achieved. This encourages the application of efficacious qualification strategies and self-evaluation to guarantee the understanding of teaching concepts, teaching plans and their implementation.

“I’m not questioning it, but I wonder to what extent the instructors actually teach. Are they really well trained or is their own teacher training too short? When intern students come to us, they don’t seem to understand what they have learned so far. So I think instructors need to know how to deliver. Of course they have to be knowledgeable in their field, right?” (Mrs Suria)

“We have to train these people to be effective in front of students. That’s another big challenge for TVET instructors. They must possess effective teaching techniques, which is not easy because knowledge is conveyed theoretically and practically. Perhaps most TVET instructors have no problem imparting knowledge theoretically, but I see them having trouble in delivering practical modules.” (Mr. Saiful)

4.5 Perception towards TVET

Malaysians generally have a negative perception towards the TVET education system. Many previous studies have found that people in this country often consider TVET as the last option to continue their studies. It is also seen as catering to those who are less outstanding

academically. One participant stated that most Malaysians discriminate against TVET by labelling it as a second choice or last resort. Talented students also feel hesitant to pursue their studies in TVET. This makes TVET difficult to be empowered.

“Another problem with TVET that I see is that most Malaysians consider TVET to be a second choice. Many talented students do not want to enrol in TVET because they will feel it is inferior. So, that's what we need to change, Malaysians must make TVET the main choice of education. We cannot discriminate against TVET. If this continues, we can't take Malaysia's TVET any further.” (Mr. Faiz)

“People in Malaysia often consider TVET to be for those who have dropped out. That's a big misunderstanding. Supposedly, TVET is considered as another option for education, rather than the second option. Malaysians must understand that conventional education or TVET are of the same standard. For Malaysians to think that TVET is designed for low achievers is totally wrong.” (Mr. Saiful)

Most of the challenges highlighted by the industry experts are related to the low image of TVET among Malaysians. Negative perceptions linked to TVET underpin a mindset of second class education for low achievement students.

“We know that, in Malaysia, TVET is considered a less prestigious choice of study than the academic stream. Many Malaysians thought that TVET was a last resort for those who are not interested in academics. The worst part is, this perception leads to minimal enrolment in TVET training programmes. This will definitely hamper the development of further TVET activities in collaboration with various industries. I think this could result in a shortage of skilled labour for this country.” (Mrs Suria)

“When Malaysians underestimate TVET, I can clearly see some serious problems. The first one is that student enrolment will decrease, then standards for industry acceptance will also be low. This will make TVET graduates less attractive for employment than academic graduates.” (Mr. Hazwan)

5 Discussion

One of the key findings from the study is uncoordinated TVET governance. With two accreditation bodies, namely the Malaysian Qualifications Agency (MQA) and the Department of Skills Development (DSD), there is a governance stalemate which presents a major challenge to TVET implementation. The TVET pathway is unclear, lacking a standard certification system to assess the competencies of TVET graduates in polytechnics, IKBN,

ILP, Community Colleges and so on (Kee & Kiong 2016). The establishment of a special committee to decide on a single certification for TVET in Malaysia could guarantee the standards and quality of TVET.

Another key finding from the data is the lack of soft skills among TVET graduates. This needs to be addressed quickly. Industry experts identified poor social and communications skills among TVET graduates and interns. Graduates with superior soft skills such as the ability to work on their own with minimal supervision, who are technologically adept and possess leadership qualities, who can easily adapt to the environment and have intellectual skills, are more likely to find a job in a shorter period of time (Azah et al. 2007). More activities to develop graduates' soft skills should therefore be implemented at campus level (Osman et al. 2008).

Similar research by Dwiyantri et al. (2021) suggested that students who aim to work in the logistics industry should develop their soft skills accordingly: negotiating skills, managing stress, presentation skills, critical thinking skills, time management, oral communication, teamwork, the ability to prioritise and to be comfortable with change (Wagner 2020 in Dwiyantri 2021). In the article, it was noted that most of the skills needed by TVET graduates in Indonesia are soft skills that cannot be prepared in a short space of time, therefore TVET institutions must optimise collaboration between logistics industries with technological solutions for learning activities.

According to industry experts, social skills are also significant for TVET graduates. The experts highlighted that poor social skills resulted in poor customer service. This is consistent with the findings of Krishnan et al. (2019) which showed that graduates' poor communication skills affected their quality in handling customers. Good social skills and public relations skills in dealing with customers are absolutely vital and will be beneficial to the company. The experts also suggested refining competency assessments for TVET graduates to take a more holistic view of their real talents.

The next key finding from the data is the competencies of teaching staff. As for Malaysia, the 4th shift of Malaysia Education Blueprint 2015-2025 (Higher Education) is an initiative to produce quality TVET teaching staff who can prepare quality graduates. In Malaysia, TVET teaching staff are sometimes called trainers, instructors or educators. Hanapi et al. (2015) stated that inefficient teaching staff is one of the factors contributing to TVET student unemployment in Malaysia. Mahazani (2015) stated that competence in communication, pedagogical knowledge, and teaching methods affects the quality of TVET instructors in skills training institutions in Malaysia. In order to make TVET the main educational option in Malaysia, teaching staff – whose function it is to impart knowledge or know-how to students or trainees – must have technical skills with professional certification and possess excellent teaching methods.

The last key finding is Malaysians' perception towards TVET. According to Mohd et al. (2015), TVET is often misunderstood as the last option in continuing studies. This stigma

probably occurs because the national education system has long placed too much emphasis on academic achievement, rather than enhancing the potential and value of individuals. Perception of TVET becomes more negative when the path to the tertiary level for TVET graduates is unclear. This makes Malaysians feel that TVET is less of an education system and more akin to practical skills training. Therefore, the experts suggest that TVET promotional programmes should be held on an ongoing basis to build awareness of the importance of TVET to the economy and national development.

6 Conclusion

This study has highlighted TVET issues and the challenges that need to be tackled through industry experts' perspective. 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. In order 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, issues such as the governance of TVET must be addressed swiftly in order to standardise TVET in Malaysia. Simultaneously, the refinement of TVET governance will inevitably have a positive impact and improve perceptions of TVET. Subsequently, TVET institutions must work closely together with industries by implementing attachment programmes such as traineeships and train the trainers to develop graduates' soft skills whilst enhancing the competencies of teaching staff in strategic industry collaborations.

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TVET@asia The Online Journal for Technical and Vocational Education and Training in Asia

CITATION:

Halik Bassah, N. A. S. (2022). The issues and challenges of TVET in Malaysia: from the perspective of industry experts. In: TVET@Asia, issue 18, 1-15. Online: <http://tvet-online.asia/issue/18/the-issues-and-challenges-of-tvet-in-malaysia-perspective-of-industry-experts/> (retrieved 31.12.2021).