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Governance of TVET in Malaysia: Gaps and opportunities for researchers

Abstract

Much research on technical and vocational education and training (TVET) in Malaysia has addressed how particular organisational and institutional configurations, conditions, and dynamics govern the operations and outcomes. Similarly, there is a move to answer the question of how quality assurance structures and partnerships between stakeholders affect the overall system. This paper is based on a systematic review of recent literature (especially within the last decade, with some intermittent references to earlier works) on TVET in Malaysia that have been framed in five categories: governance, quality assurance, industry, perception, and funding. It identifies the main research gaps and concerns, and suggests areas of research that would enable future works to better understand and improve TVET in Malaysia. A large variance between different areas of research was noted. While matters of governance are often raised, less attention has been placed on resolving the unwieldy multiplicity and overlap of jurisdictions. A plethora of anecdotal assumptions about TVET was also found, leading to a lack of representative findings. Therefore, the paper, in suggesting concrete areas for future research on TVET in Malaysia, emphasises the need for research that could drive and inform policy decisions at the national level for TVET in Malaysia.

Keywords: Technical and Vocational Education and Training (TVET), Malaysia, evidence-based policy, governance of TVET.

1   Introduction

Technical and Vocational Education and Training (TVET) in Malaysia is an area that is receiving increasing attention in the country, with the national budget allocation consistently growing over the last decade. With the recognition that TVET has the potential to drive the economy to new heights, and the labelling of TVET as a 'game changer' in the 10th Malaysia Plan (Economic Planning Unit 2015), efforts for improvement of the TVET ecosystem have been well underway. The formation of the National TVET Council (Majlis TVET Negara, MTVET) in early 2021 is a culmination of these efforts where experts from within the government, industry, academia and civil society were assembled to provide input directly to the Prime Minister recommending ways to improve Malaysia's TVET in five focus areas - governance, industry, quality, funding, and branding.

The authors of this paper were involved in a research partnership formed in early 2021 between The Asia Foundation and the International Institute of Public Policy and Management (INPUMA), University of Malaya, to support the growth and improvement of

TVET and to understand the critical constraints and challenges facing the TVET system. The research involved engaging with diverse stakeholders in the national TVET system in interviews, focus group discussions, a policy lab, and site visits. The stakeholders ranged from government officials, institutional representatives, and TVET practitioners, to private sector players and TVET administrators, instructors, and students. The extant literature on the TVET landscape in Malaysia was also reviewed, ranging from articles and chapters in journals, books, and conference proceedings to consultants', institutional, and news reports, as well as official policy documents. The outcome was the published report, *Recommendations Towards Improving Technical and Vocational Education and Training in Malaysia* (The Asia Foundation 2022). The report assessed the national TVET system and its ecosystem and proposed actions to improve the system within the framework of the five focus areas of MTVET. However, considering the academic literature on TVET in Malaysia was found to be lacking in comprehensiveness, the literature review of the published report of the research partnership focused mostly on reports from other international bodies. Furthermore, the findings were streamlined to the data collected from interviews and other engagements with stakeholders carried out during the fieldwork. It was this observed need for further research on TVET in Malaysia that spurred the publication of this current paper.

Recognising the critical role of robust local research in the formulation and implementation of TVET policy, this paper highlights the main contours of the extant literature on Malaysian TVET that relate to 'governance' both as an overarching concern of TVET as well as one of the five focus areas of technical and vocational education and training. This paper highlights, especially, papers published within the last 12 years, from 2010 to 2022. However, intermittent references to earlier, important works from the 1990s and 2000s are also included. It aims to identify the general nature and concerns of the literature on TVET governance in Malaysia as well as the main research gaps and general concerns rising therefrom, finally concluding with suggested areas and directions for further investigations. In conjunction with this special issue on governance, the ultimate goal of this paper is to contribute towards research that would strengthen evidence-based policymaking and application in TVET governance in Malaysia.

This paper draws from the notion of governance as set out by international organisations such as the United Nations Educational, Scientific and Cultural Organization (UNESCO), the International Labour Organization (ILO), and the European Training Foundation (ETF). UNESCO, for example, defined 'governance' in 2010 as being "concerned with how the funding, provision, ownership and regulation of TVET systems are coordinated, which actors are involved, and what are their respective roles and responsibilities, and level of formal competence – at the local, regional, national and supranational level" (UNESCO 2010, 6). A 2015 ETF report examining TVET governance in the Southern and Eastern Mediterranean, meanwhile, highlights three areas of governance as being key concerns: 'planning and management', 'finance and funding', and 'quality assurance' (European Training Foundation 2015). This compares closely to the five focus areas identified by the MTVET, differing only slightly in the extent of differentiation between each category.

The main findings that follow have been arranged into sections aligning with the focus areas of the National TVET Council: Governance, Quality Assurance, Industry, Perception (Branding) and Funding. For each of these sections, this paper examines discussions emerging from the available works and outlines gaps and potential for further research. The final section is a short conclusion discussing how this paper contributes to the growing body of work in Malaysian TVET research.

2 Governance

Governance relates to the organisational and institutional structures, processes, and dynamics that provide the strategic directions for TVET, regulate the education and training, exercise oversight over the regulatory framework of the system, and implement policies and practices to support the operational functions and improve the quality of the system (The Asia Foundation 2022). In this way, TVET in some countries, including Malaysia, continues to see the state as the main actor determining the functions and running of the system, although there is a push to be increasingly market-led.

TVET in Malaysia was developed predominantly by and for the state. From the late 19th century to the third quarter of the 20th century, technical and vocational training in colonial Malaya and early post-colonial Malaysia were carried out for the administrative and economic needs of the state (Mustapha 1999; Mustapha 2001; Sharin & Zulkipli 2009; Rasul et al. 2015; Chang 2018).

From the 1980s onwards, the literature documents a shift of views. At this time, stakeholders in government as well as in the private sector expressed the belief that for TVET to contribute effectively and efficiently towards the country's industrial and modernist aspirations, TVET needed to serve and provide greater benefits to the private sector (Ahmad 1994; Fok 1994; Mustapha 1999; Mustapha 2001; Tahir 2010; Rasul et al. 2015). While there has been a shift in this regard, TVET in Malaysia presently continues to be predominantly state-led, with private colleges being fewer in number and smaller in student capacity.

2.1 State entanglement and incoherence

The literature reviewed concur in assessing Malaysia's state-led TVET system as lacking in coherence, coordination, and effectiveness due to the entanglement and overlap of various state institutions, policies and practices. At any given time, about twenty government bodies belonging to nearly a dozen ministries are involved in TVET, leading to confusion, lack of clarity, weak enforcement, duplication, fragmentation, and wastage (Pang 2011; Cheong & Lee 2016; Rasul et al. 2015; Chang 2018).

Yet, works that concretely tackle the need for current TVET to come to terms with its legacy of state dominance and to identify in-depth solutions have not been forthcoming. More research is needed to look closer into several areas within governance. For example, which agency of the many ministries with TVET institutes and programmes of their own should best

champion the national TVET agenda, or should a new TVET Ministry be formed instead? How could ministries strategically collaborate, to streamline the plethora of courses available among different TVET institutions, eliminating duplication and, thus, wastage of resources? What are the possible formulations to manage information across all ministries involved in TVET? How could state governments and district/town councils best engage with TVET providers? While one of the main aims of the National TVET Council is to integrate and coordinate governance of TVET, more research and data are needed to support the decisions and plans made.

2.2   Catalysing a more inclusive TVET

Consideration of governance also affords the opportunity to consider the effects of Malaysia's particular brand of politics on TVET in terms of how, and to what extent, sections of the population are excluded from accessing opportunities in TVET. The government's 11th Malaysia Plan 2016-2020 admits the need to improve access to education for 'disadvantaged groups' – defined as those belonging to the 'B40', i.e., those in the 'bottom 40%' poorest households of the nation, as well as youth, women, rural communities, the elderly, and people with disabilities (Economic Planning Unit 2015).

A recent report, for example, found that only 197 students with special needs were studying at 17 polytechnics and college communities in the country (Sani 2020). There has been very little literature before or since then on the status of access, participation, and representation of the disabled and other disadvantaged groups in general in TVET programmes.

In terms of the composition of TVET students in the country, several reports point out the lack of Malaysian Chinese and Indian youth, who only make up a negligible percentage of new intakes in public TVET institutes (Ismail & Hassan 2013; Chang 2018). Similarly, Buang et al. (2015) showed that the intake of indigenous non-Malays is low overall.

Pang (2011), meanwhile, asserts that in 2010, Indians and Chinese preferred private TVET institutions, forming the overwhelming bulk of trainees registered, whereas 80% of the total TVET student population in Malaysia were Malays enrolled in public TVET institutions. Mohd Zain (2008) and Chang (2018) both go on to observe, a decade apart, that racial segregation is a major issue within the TVET system in Malaysia.

Although there is some research on the ethnic imbalance in TVET in Malaysia, it is severely lacking with regards to gender and the disabled community. Therefore, more research into ethnicity, gender, and the needs of the disabled is sorely needed if inclusivity is to be realised in practice and not merely verbalised and written as pledges and policies.

3   Quality Assurance

Quality assurance encompasses a variety of factors, and specific to TVET, the main issues that emerge in research is the quality in curriculum design and delivery. The former spans

quality frameworks and the way in which curriculum is created, while the latter covers elements of how the curriculum is transmitted to the students, including instructor quality.

3.1 Curriculum design

While the overall TVET curriculum framework is set by the National Occupational Skills Standards (NOSS), syllabi for courses are designed by the hundreds of institutes offering TVET. This has led to different TVET certifications, standards, syllabi (Mohd Zain 2008) and quality (Chang 2018) with some employers placing higher value on an institution's reputation than that of the certification (Subramaniam & Aziz 2022). Many quarters have highlighted the insufficient contribution of industry in designing TVET curriculum and the lack of research on the effects of such involvement (Mohd Zain 2008; Omar 2017; Cheong & Lee 2016). Omar (2017) points to the absence of industry collaboration and therefore curriculum specialization among public TVET institutes. Research also points out the positive effects of collaboration between local and international TVET institutes to develop transnational standards of teacher training, accreditation, and curricula (Jailani et al. 2009). Yet, some assert there remains the need for greater linkages between TVET institutes and research institutions to develop other aspects of TVET, such as instructors' pedagogies and skills (Cheong & Lee 2016), and entrepreneurial, social, English communication skills among TVET graduates (The Asia Foundation 2022).

While there is lack of support for closely linking TVET curricula with industry input, much more research is needed to examine the extent and consequence of these proposals, their potentials, as well as their possible pitfalls.

3.2 Curriculum delivery

Research in the area of curriculum delivery have shown a significant variation in terms of teachers and instructors' extent and level of technical and pedagogical knowledge, skills, qualifications, and industrial experience (Katiman & Othman 2003; Noordin & Sapiee 2010; Yeo & Abdul Halim 2010). Mat Nashir & Hamzah (2018) outlined the desired traits of TVET instructors and further arranged them into three groups: 'knowledge', 'skills', and 'attitude'.

Notwithstanding the wish list of desired traits, there has been little research on how to achieve these required traits. Questions that arise include to what extent TVET instructors are able to implement tools to effectively promote critical thinking, problem-solving skills, creativity, and innovation. Are the instructional techniques suited to the learner's characteristics and enthusiasm? To what extent do such techniques shift away from lectures and more to collaborative work and study methods that involve active learning (Che Amran et al. 2020)?

Lack of 'industry experience' among TVET teachers, instructors and trainers is claimed to be among the factors that are said to have reinforced industry's negative sentiments on graduates from the TVET system (Mokhtar et al. 2019). The lack of such exposure can be attributed to a lack of exposure and opportunities within TVET to engage with industry as well as a lack of

access to research and information. As a consequence, the practical skills training experienced by TVET students and trainees are often outdated and may no longer be relevant in industry (Mustapha 2017). A proposal to redress the problem of instructors' inadequate industrial or practical exposure and experience has been to provide greater opportunities for TVET teachers and trainers to attend continuous professional development in those areas in which they lack experience (Mokhtar et al. 2019; Subramaniam & Aziz 2022). Abdullah et al. (2019) in their survey of 304 TVET lecturers of construction technology civil engineering industry found slight decreases in 'proficiency level profile' of lecturers who had served longer than 15 years. In parallel, the lack of retraining opportunities in specific areas of their instruction is the main lament of TVET lecturers surveyed by Mokhtar et al. (2019). Another suggestion, made with reference to a robust Australian instructor continuous professional development model, is to improve the data management at the national and institute level via a phone application, thus enabling monitoring of competence levels and thus tailored support to instructors (Subramaniam & Aziz 2022).

The call for greater pre- and in-service and industrial training and experience for TVET instructors has been widely made by many quarters as part of efforts to make instruction more relevant, effective, and up to date (Mustapha 2001; City & Guilds Centre for Skills Development 2008; Omar 2017; Subramaniam & Aziz 2022). Yet, there has been an absence of research in Malaysia on how the current training has enhanced the instructors' and institutions' capabilities to meet industry needs (Wan Ahmad et al. 2009; Cheong & Lee 2016). Husin Chua & Jamil (2014), for example, suggest the relationship between teachers' training and students' achievements was not as evidential as presumed, and that more studies are needed to investigate why the 'skill gap' among TVET graduates still existed even when their instructors' level of knowledge was found to be 'acceptable'. As for private TVET institutes, it is only presumed that the profit motive incentivises such institutes to strive to make their programmes impactful and effective, but there has not been any notable research to determine the veracity of such assumptions (Cheong & Lee 2016).

The Asia Foundation (2022) highlighted the potential of career development support for instructors and staff in TVET providers. Drawing from such works as Martini and Cavenago (2017), much of the literature reviewed urge comprehensive professional development programmes to enable instructors to stay industry-relevant over time, in addition to improving on their pedagogical skills and building leadership abilities for further career growth. For the top managers of TVET institutes, the focus of professional development would improve management and stakeholder engagement skills. Research in this area has not, however, looked at questions including how efforts to improve lecturers' competencies can take shape in partnership with supervisors. Or to what extent mentoring and career counselling have proven beneficial to TVET institutes as places for working and learning, or to enrich instruction. Additionally, to what extent variation and job rotation, the leveraging of technology, and on-the-job mentoring take place to support Malaysia's current TVET instructors (Che Amran et al. 2020).

4 Industry

A well-functioning TVET system is dependent on close collaborations with all its stakeholders, but the relationship between the government/institute and industry, and how this relationship is governed remains the core partnership that enables the system to create graduates that fit the needs of the workforce.

Despite repeated pronouncements about new plans and emphasis on industry involvement in TVET, the level of the latter in technical and vocational education and training remains low, as attested by the low number of institution-to-industry memorandums of understanding (Rasul et al. 2015; Minghat et al. 2013). Feedback from industry reveals that they have seldom been invited to participate in government organised TVET related activities (Minghat et al. 2013). Industry players see a lack of clear or direct incentives to drive their participation in TVET when the immediate or even foreseeable returns on their investment is not tangible (Rasul et al. 2015). Industry has also expressed concerns about the lack of facilities, mentors or supervisors, or other resources as challenges to their participation in dual training schemes (Rasul et al. 2015). This contributes to the situation where a majority of companies are unwilling to participate in such schemes (Md. Deros et al. 2012). The Department of Skills Development's research in 2012 found that almost 40% of the 253 companies they visited were not keen to collaborate, citing reasons like low perceived impact and weariness of bureaucracy involved (Md. Deros et al. 2012). Even those companies which were interested to collaborate were quick to point out their time and financial constraints (Md. Deros et al. 2012).

Malaysia has worked towards emulating successful TVET models overseas with closer industry-institute ties especially in the case of the German-Malaysian Institute and the Penang Skills Development Centre. However, these partnerships are not without incident, and some German companies felt the National Dual Training Scheme did not fulfil their expectations, leading to some German organisations attempting to create their own certification here (Malaysian Insight 2016). This incident underscores the importance of contextualising any international influence to the local situation here in Malaysia before executing a strategy, and in parallel highlights the need for local researchers to better outline the needs of Malaysian industry and institutes in their research.

5 Perception (Branding)

It has long been recognised that Malaysian society has a generally poor perception towards TVET compared to the more 'academic' and theoretically-inclined institutes of higher education (Law 2007; City & Guilds Centre for Skills Development 2008; Awang et al. 2011; Department of Higher Education 2015). Community colleges and TVET institutes, for example, lament that negative perceptions towards training focused on technical skills add to the already tough competition they face from 'academic' colleges and universities and the struggle to attract financial support and students (Mohd Zain 2008; Muthiah 2018). However,

Awang et al. (2011) showed that students who had already experienced TVET for at least one year held higher perceptions of TVET than secondary students, both in terms of the type of student in the system as well as the job prospects.

Students' own interests were found to be highly significant in determining the choice of post-secondary education plans (Awang et al. 2011; Jamlos 2012). However, a common finding in the early literature is the negative influence of parents and family, peers, and school counsellors and teachers on the decision-making processes of youth, especially young women, on their post-secondary school life options (City & Guilds Centre for Skills Development 2008; Ariffin et al. 2018). But a 2013 survey departs from this, finding that parents see technical and vocational skills as potentially very valuable for their children (Patel 2014). Even more recently, Khazanah Research Institute (2018) revealed that young job seekers and young workers view TVET as the most useful qualification in getting a good job. Buang et al. (2015) identified factors that influence students in when considering TVET for their post-secondary education: the institute's reputation, course offerings alignment, physical location and facilities, financial viability as well as information provided. Abdul Aziz et al. (2020) have suggested an alternative way of looking at perceptions towards TVET, namely, by categorising those factors into 'pull' factors (availability of training facilities, competence of instructors, curriculum, marketing, career prospects, programmes offered) and 'push' factors (student's interests, views of family, peers, and society).

While works such as Awang et al (2011) and Buang et al. (2015) are interesting, insightful and important, these studies were done in small cohorts, and are yet to fulfil the need for a wider, more representative study to investigate these perception characteristics. More research and analysis should, therefore, be carried out to validate and substantiate the researchers' conclusions and recommendations.

Overall, the research around branding and perception of TVET in Malaysia is heavily skewed towards understanding perception – which is the end-result, without having sufficient focus on branding – which encompasses the activities that can be pursued towards improving that perception. This is a large gap in the research which, if filled, can greatly assist decision-makers at the institute, ministry and national level on how to best create branding that would successfully influence potential students and their parents on the potential of TVET.

Another consideration is how negative perceptions of TVET have very concrete implications for governance in terms of the conditions and viability of providing (i.e., funding and financing) for the needs of TVET institutes. This brings us to the issue of funding and its implications on the state and viability of TVET in the following section.

6   Funding

TVET in Malaysia is predominantly funded by the government through allocations to the Ministry of Education, the Ministry of Higher Education and the Ministry of Human Resources as well as the other ministries whose agencies operate TVET centres. Private

TVET institutions are funded through student fees as well as the Human Resources Development Corporation (HRD Corp) and the Skills Development Fund (SDF). The HRD Corp, under the Human Resources Ministry, is cited as one of the more successful cases of TVET financing in developing countries (Song 2016).

In terms of funding, the main point that recurs in the research relates to financing upgrades to TVET institutes. The lack of access to tools, machines, facilities, infrastructure, and resources have long been raised by TVET educators and students (Mustapha 1999; Mustapha 2001; Fernandez 2010; Khairani & Razak 2013; Audu et al. 2013; Bakri & Zakaria 2018; Yeap et al. 2021). Many TVET institutes today, both public and private, are known to depend on donations for the machinery and equipment used by their instructors and students.

Despite being such a critical aspect of the question of TVET in the country, there is very little academic or public policy literature addressing in depth mechanisms to fund and finance TVET in Malaysia. Despite the high praise for the HRD Corp (Song 2016), for example, greater detailed research and deliberations are needed to address the obvious lack of academic discussion around the current funding and financial models affecting TVET institutes and their trainees around the country. The general situation of inadequacy persists despite much public rhetoric and pledges about 'empowering' TVET education and training in Malaysia. On the specific issue of funding improved facilities, the lack of comprehensive, in-depth, and detailed research on the matter prevents understanding of the exact extent of the problem and the realistic means of its resolution. What can be said about the inadequacies of such 'hardware' for TVET raises the significance of governance, with which this literature began.

7   Conclusion

This literature review has sought to highlight works on TVET in Malaysia specifically within the areas covered in the five focus groups of the National TVET Council. The goal was to present the current research and determine gaps and unanswered questions to be investigated which could form the basis of more robust evidence-led policy making in Malaysia. A glance at the sections in this paper drives home the point that some areas within TVET are receiving much more attention and research than others. Having said that, this paper makes plain the need for more research and efforts to tackle the most basic questions surrounding the sector in all areas, from governance and quality assurance, to challenges of perception, funding and industry collaboration. Much of the assertions and the underlying assumptions made by researchers and policymakers must be seen as anecdotal, limited, or unrepresentative until in-depth and comprehensive data has been acquired and analysed to shed light on such assertions and assumptions. This applies to the multitude of questions and issues raised in this paper, involving the lacunae of data on inclusion among TVET students, the state of financing of the institutes, and the larger questions of the overall approaches, direction, and aims of TVET in Malaysia.

Indeed too, there is a large amount of information to be gathered about the sector that does not fall neatly into any of the categories of the five focus groups, and thus would most logically be subsumed under governance. These include addressing the lack of research about private TVET institutes and how they can be better supported in the current system as well as how to best collect, share and disseminate data between stakeholders. Additionally, there is a need to investigate how we can move from bilateral relationships to more multilateral collaboration between the government, industry, institutes, professional bodies and even the community in areas spanning from funding to skills to innovation. United Nations Educational, Scientific and Cultural Organization – International Labour Organization (2018) proposes this as the whole-of-society approach to bring further development to TVET systems.

We should definitely continue learning from the lessons, experiences and ideas of TVET around the world to inform TVET in Malaysia. However, in parallel with this, there needs to be an examination of the conditions that will lead to success in Malaysia. Notwithstanding that, there is obviously an urgent and critical need for on-the-ground research within the country to gather data on the conditions and state of TVET faced by the millions of students, instructors, and administrators of TVET to drive any actions or decisions to develop the sector. We hope that this literature review, if only to inform researchers interested in knowing what gaps and questions to pursue, has suggested areas to pursue that will further boost evidence-led policy making in TVET in Malaysia.

Acknowledgements

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