

*International Journal of Learning, Teaching and Educational Research*  
Vol. 20, No. 12, pp. 19-34, December 2021  
<https://doi.org/10.26803/ijlter.20.12.2>  
Received Sep 11, 2021; Revised Dec 03, 2021; Accepted Dec 07, 2021

## Industrial Engagement in the Technical and Vocational Training (TVET) System

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**Abstract.** From 2010 through to 2021, this study critically assessed Malaysia's government efforts to increase industrial involvement in the country's TVET system. The goal of this research is to look at what the Malaysian government has done to strengthen industrial involvement in the country's TVET system from 2010 to 2021, as well as to make recommendations for any future changes. A textual narrative synthesis, based on three elements: strategy, execution, and the impact of those policies in promoting industrial involvement in the Malaysian TVET system, was used to conduct a systematic review. Five government policies since 2010 have been extracted from 231 linked-literature sources, each of which presented a strategy to improve industry-TVET cooperation. All of these government measures, according to the report, adopted a corporatist paradigm, in order to encourage corporate participation in the national TVET system. This was done by providing various incentives, including tax breaks, training grants, and subsidies. Improvements have been suggested to boost the industry-TVET relationship in Malaysia, particularly by giving connected industries some obligations to participate in the country's human-resource development, in comparison to the German model of the dual Apprenticeship programme.

**Keywords:** industrial engagement; technical and vocational education; vocational education; dual system; industry-TVET partnership; Malaysian TVET; Malaysian government policy

## 1. Introduction

Malaysia is a developing country with a strong emphasis on industrial, agricultural, and service industries. As Malaysia progresses toward becoming a developed country, a considerable effort has been made to build local human resources, in order to meet the present and the future job demand. Since 2011, the country has made substantial efforts to develop the local human resources through government incentives and initiatives, in order to improve the country's TVET system, thereby resulting in the production of future talent for the country. Malaysia has pledged to become a society that achieves sustainable growth, equitable wealth distribution, and a good quality of living for all of its residents by 2030, as part of its "2030 Share-Prosperity Vision" (Malaysian Ministry of Economic Affairs, 2019). Using advanced technology in the industrial and service sectors, as well as boosting investment in the machinery and equipment sectors, are some of its efforts to attain these aims.

As a result, Malaysia wants a minimum of 30% of its workforce to be qualified as high-skilled employees by 2030, in order to meet the demands of the job market. TVET has risen to the top of the priority list for accomplishing these goals. Although Malaysia's TVET system is on track to produce skilled people in demand by local industry, TVET products must exceed the quality standards set by the particular industries or corporations. According to the Malaysian Economic Plan Unit (2015), feedback from industry has revealed a mismatch between graduates' abilities, knowledge, and attitudes and what is expected in the job situation.

In order to address this problem, we need a formula for increasing the breadth and depth of industrial participation in the TVET systems, in order to establish high-quality training programmes that meets the needs of businesses and those of the present labour market. Industrial involvement in the TVET system is usually done on three levels: (a) industrial experience; (b) collaboration and partnership; and (c) law (Yunos, Sern & Hamdan, 2018).

According to Yunos, Sern, and Hamdan (2018), most TVET institutions request industrial experience through internship programmes from industry; because this is the best platform for students to apply their knowledge and skills in a real-world setting, while also understanding the dynamic world of work. In order to solve each problem, the partnership or collaboration parts require synergy among all the industries and TVET centres (Yunos, Sern & Hamdan, 2018). For example, companies contribute input and participate actively in the development of TVET curricula; while TVET centres do the necessary research and development to tackle the industrial concerns.

The third pillar, legislation, refers to government policies and regulations regarding industrial engagement in the TVET system, particularly various incentives granted by the government to encourage industrial participation in their TVET system (Postiglione & Tang, 2019). Although industrial participation in the TVET system is critical, gaining their participation is difficult; since there is still a grey area in determining the win-win benefits for both parties. Every TVET

centre is keen to form strategic partnerships with businesses, in order to provide students with the necessary industrial experience through internships, apprenticeships, on-the-job training, and other programmes. These exercises are critical in assisting students in becoming physically and intellectually ready for a job (Tan & Tang, 2016). However, TVET colleges can only offer a limited number of mutually beneficial services to industry.

In Malaysia, the On-the-Job Training (OJT) programme for TVET students is currently the most important industrial contribution to meeting the needs of training centres, particularly for graduates from local TVET universities. However, their contributions are lower than that which TVET institutions had hoped for; because they require significant industrial input in the creation and improvement of their programmes, in order for them to be marketable. On the industrial level, the present cooperation with TVET centres tends to be one-sided, due to the lack of mutual interest that TVET institutions can offer to potential industrial partners (Pillay et al., 2013).

The main benefits of partnering with TVET universities are usually letters of recognition, tax revenue, and personnel recruiting. However, only tax revenue appears to be a convincing and profitable incentive for the industries; whereas new recruitment after OJT is becoming less popular, as several studies have shown that many employers still prefer to hire foreign labour rather than local labour, because of the lower wages (Norsi'ee et al., 2014). The Malaysian government has taken these challenges seriously, and the action plan has been incorporated into most government programmes and national planning, as well as being revised on a regular basis.

Consequently, this research will critically examine all the government policies and plans dating back to 2010, in terms of incentives and tactics to increase industrial engagement in Malaysia's technical and vocational training system. This analysis was carried out by the author, based on three major elements: strategy, implementation, and impact.

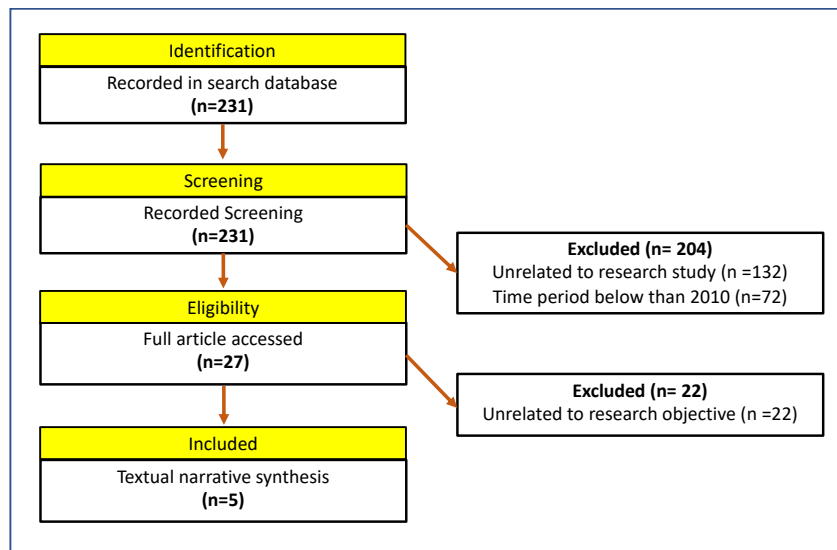
## **2. Methodology**

This research is based on a ten-year comprehensive literature evaluation of Malaysian government policies and pertinent publications. The primary source of information in this study comprised secondary data from government official papers, such as budget planning, annual reports, and policy filing, which was supplemented with journal articles from internet resources.

Popay et al. (2006) and Lucas et al. (2007) proposed a method of textual narrative synthesis, which was implemented in this study, by using a standard data-extraction format to extract various study characteristics (e.g., issues, findings, suggestions, etc.) from each piece of literature. According to textual narrative synthesis, these studies can be divided into homogeneous groupings. Then, using the data retrieved, the similarities and differences between the various research projects were evaluated (Lucas et al., 2007). The quantitative counts were able to show the number of studies with each attribute, because of the consistent coding

style. To address the research question, a commentary on the strength of evidence could be employed (Lucas et al., 2007).

The first step in this research is to find relevant material by using general keywords, such as "Malaysian Development Plan" and "Malaysian government policy" in the Google Scholar database. A total of 231 literature sources have been identified, as a result of this approach. The selection and refining process was carried out until five primary literatures were chosen to be analysed by utilising the textual narrative synthesis (see Figure 1). The technique adopted by Almestahiri et al. (2017) in their literature-review study was followed for the refining and selecting process. These five literatures were chosen because, in addition to being within the researcher's timeline, they had a specific objective relating to industry-TVET system collaboration (i.e., the years 2010-2021). The remaining literature sources were employed to back up the study's discussion and findings. Figure 1 depicts the overall process of selecting the literature, as implemented by Almestahiri et al. (2017).



**Figure 1: The literature-selection process**

The selected literature was critically examined for parallels and variations in strategy, implementation, and impact of government policies on increasing industrial participation in the Malaysian TVET system. The author also made certain that all of the study's conclusions would be reported professionally, thereby avoiding faked or fabricated data, as well as any sort of plagiarism.

### 3. The Findings

Malaysia's 10th Development Plan (10th MPDP, 2011-2015) and Malaysia's 11th Development Plan (11th MDP, 2016-2020), which are the five-year Malaysian blueprints for developing the country's social, environmental, and economic status, are two of the five Malaysian government policies chosen for textual narrative-synthesis analysis. The government's goal to offer a fair standard of life to all Malaysians by 2030, is the third policy in Malaysia's Shared-Prosperity Vision 2030, which was presented in 2019. The fourth policy is the National

Economic Recovery Plan (PENJANA), which focuses on labour-market stabilisation; and this was implemented in 2020, as a response to the social and economic catastrophe brought on by the global pandemic of Covid-19.

The last policy chosen for further analysis was the Strategic Programme to Empower the People and the Economy (PEMERKASA, 2021), which is highly focused on initiatives to boost economic growth, to support businesses, and to continue targeted assistance to people and the sectors still affected by Covid-19.

### **3.1 Malaysia's 10th Development Plan (MDP)**

The Malaysian government is preparing the country to become a developed nation by 2020 through its 10th Development Plan (2011-2015), which requires the country to double down on productivity and innovation, as well as to prepare a generation to become a creative and innovative workforce (Malaysian Economic Plan Unit [EPU], 2010). Furthermore, the government is required to implement the Vocational Education Transformation within that timeframe, in order to transform Malaysia into a developed country with high-income residents (Abdul Rahman, Mohammad Hussain & Mohammad Zulkifli, 2020). In order to fulfil the needs of developed countries, Malaysia's government has recognised the need to improve Malaysian skills in 2010, in order to promote employability by addressing the future job-market needs. The 10th MDP outlined a strategy to rebrand Malaysian TVET by updating and harmonising its curriculum quality with the industrial requirements, while also seeking greater enrolment in the TVET programmes.

The introduction of Industrial Leading Bodies (ILBs) to promote the public-private partnership and to build the industry's recognition of the Malaysian TVET system is one of the important initiatives made to restructure Malaysian TVET, in order to render it more industrially oriented. The ILBs are made up of representatives from various business sectors, who play an important role in offering feedback and guidance on the Malaysian TVET system, the in light of the current and future market trends. Their advice is primarily focused on the following topics:

1. The establishment of an occupational framework, which examines the structure, job description, and abilities required for a specific industrial vocation.
2. NOSS (National Occupational Skills Standard), is a collection of standard abilities expected of skilled professionals in certain occupational categories, based on the current industrial needs.
3. The necessity for upskilling, new skilling, and skill certification among current industrial workers.
4. Conducting research (Department of Skills Development, 2020)

Thirty ILBs are expected to be actively participating in Malaysia's TVET system by 2019. The Malaysian Department of Skills and Development has developed the National Occupational Framework (NOF) and the National Occupational Skills Standard (NOSS), as guidelines for curriculum development and revision in Malaysian TVET programmes, together with the help of expert panels comprising industrial experts and practitioners from specific ILBs occupation sectors. The



Occupational Framework defines a certain occupation's work scope, in terms of job competencies. The National Occupational Skills Standard (NOSS) is then developed, with a total of 1,819 Malaysian National Occupational Skills Standards (NOSS) developed in 2019 as a guideline for producing curricular content for Malaysia's TVET training programme.

Additionally, this offers companies instructions for training and examination requirements for their employees, in order for them to become trained and certified personnel, in accordance with the applicable standards and norms.

Another strategy implemented, as part of the 10th MDP, was to engage Malaysian industries in the TVET system, by streamlining TVET delivery through the National Dual-Training System (NDTS). The NDTS is an apprenticeship programme, in which 70 to 80 per cent of the training or the practical session is conducted in the real workplace; while 20-30 per cent of the theoretical lesson is conducted in TVET training centres, either through block-release (i.e. one week in a training centre and four weeks in the workplace for every month) or day-release (i.e. one day in a training centre and five days a week at the workplace) or day-release (i.e. one day in a training centre (Ali et al., 2015). The NDTS has received a lot of attention, because it provides:

1. Future skilled workers with on-the-job training.
2. More opportunities for an apprentice to be hired because the company pays close attention to their performance and abilities.
3. An apprentice's productive contribution that helps both the employer and the apprentice.

Although the NDTS was first implemented in the Malaysian TVET system in 2005, the government has budgeted a total of MYR 150 million (about USD 35 million) under the 10th MDP in 2010, in order to encourage more students, training centres, and enterprises to participate in the NDTS programme. Furthermore, industries which provide NDTS training programmes are eligible for the following benefits:

1. A claim on the levy;
2. Deduction for income tax (single tax deduction);
3. A stipend for each pupil they have tutored (USD 50 per student).

The government has set aside USD1.7 million to teach experienced employers in the workplace, who will coach apprentice trainees, to help them to give training to their apprentices more successfully. During the 10th MDP era, 20,000 people are projected to join the programme, primarily school dropouts, in order to contribute to the national skilled-talent pool. The 10th MDP's strategies had a substantial influence on increasing access to excellent TVET programmes and increasing annual enrolment in the Malaysian TVET system from 113 000 in 2010 to 164 000 in 2013 (Economic Plan Unit, 2015).

Moreover, during the 10th MDP, the National Dual Training System benefited 38 000 employees, including 12 835 teenagers, who were able to find work after completing their training programme (Economic Plan Unit, 2015).

### 3.2 Malaysia's 11<sup>th</sup> Development Plan

The Malaysian government released the 12th iteration of the Malaysian-Development Plan (2016-2020) in 2015, as the ultimate blueprint for attaining developed-nation status by 2020. The transformation of the Malaysian TVET, in order to satisfy industrial need, was one of the major issues in the 11th MDP. The goal was to shift the country's economic activities from labour-intensive to knowledge- and innovation-intensive. The transition is expected to result in the creation of 1.5 million new jobs, 60 per cent of which would require TVET-related skills, making TVET a game-changing mechanism for developing skilled employees that the country needs (Economic Planning Unit, 2015).

A major emphasis has been placed on enhancing collaboration with industries, in order to continue to expand the number of people who enrol in TVET, and to improve the program's quality and institutions, and to raise the overall profile of Malaysian TVET (Economic Plan Unit, 2015).

Through the implementation of the tenth plan, the Malaysian TVET system has been improved by allowing industry-led programmes to eliminate skills mismatch and to boost graduate employability. From curriculum creation to student enrolling, training delivery, and job placement, the industry-led TVET programme entails collaboration between industry and TVET schools throughout the entire process. Through collaboration with the industrial players, an Industry-Skills Committee (ISC) has been formed to identify the relevant competencies for each occupation, as well as to develop and proposed new partnership models that might enable industrial involvement at every level of the Malaysian TVET system, particularly in the areas of curriculum design and delivery, in order to ensure that they are job-oriented; and that they meet the needs of the current job market.

The ISC also reviews TVET training modules to see if they might be confronted with a problem, project, or product based on real-world industrial activities, in order to expose students to real-world situations.

The effectiveness of industrial engagement in the NDTS programme during the 10th MDP was reinforced during the 11th MDP by setting a target of 6 000 skilled people created annually from this programme (Department of Skills Development, 2020). The key reason for these successful collaborations is that this programme benefits the company or industry in terms of employee recruiting; furthermore, it allows its employees to participate in this programme for upskilling and reskilling, in order to be certified as skilled workers (Department of Skills Development, 2020).

The NDTS programmes have been allotted USD 9.5 million in the 11th plan. The new 1MASTER NDTS was created in response to the specific human-capital requirements of Malaysia's industrial region. The Iskandar Malaysian Development Corridor, for example, is a big new industrial sector located in Malaysia's southern region. The youth and the current workers in those locations have benefited from the 1MASTER NDTS initiative, which has provided opportunities for skill training and employment.

The Structural-Internship Programme (SIP), a systematically organised internship programme for undergraduates and TVET trainers from all over the country, in order to equip them with real working experience, was introduced through the 11th MDP, as another new incentive to maximise industrial involvement in the Malaysian TVET system. Previously, internship programmes were managed separately by TVET training centres. Most of the time, TVET centres or trainers, must discover the related businesses or industries for their internship programmes.

The SIP makes the internship placement process much easier to navigate. The Malaysian government established the Talent Corporation Malaysia Berhad (TalentCorp) to create a database of possible candidates and sectors for industrial training programmes. Malaysia's talent strategy to become a dynamic talent hub is planned and organised by TalentCorp, an organisation under the Ministry of Human Resources. TVET trainers have additional options in picking business and industrial centres, in order to gain work experience with TalentCorp's internship database, while business centres can choose individuals to groom, as their future employers.

TVET trainers, who are able to get an internship through the SIP programmes are entitled to a monthly minimum allowance of USD100.00 (Malaysia Ringgit 500.00) from the employer (TalentCorp, 2018). The SIP's participating company, on the other hand, benefits from a double tax reduction, if they meet the government's requirements. These include: (a) registering with the TalentCorp; (b) providing a minimum monthly allowance of about USD100.00; (c) offering a minimum 10-week internship duration; and (d) clearly defined learning outcomes for their interns (TalentCorp, 2018). The SIP programmes also assist the company by increasing the awareness of its internship programmes and developing stronger ties with TVET universities. Malaysian SIP programmes have successfully administered internship programmes for 94 133 students at 16 219 organisations, as of December 31, 2020. In addition, the double tax reduction incentive has benefited 11 161 businesses (TalentCorp, 2021).

### **3.3 Malaysia Shares Prosperity Vision 2030**

In 2019, the Malaysian government, which had hoped to become a developed country by 2020, was depressed by its dismal performance; and it was understood that the country needed to pursue an additional vision, which is:

“To make Malaysia a country that achieves sustainable economic growth, along with fair, equitable and inclusive economic distribution, across all income groups, ethnicities, regions and supply chains. The emphasis is on the principle of equitable outcome, rather than on opportunities” (Economic Planning Unit, 2019, p. 5).

The Education and TVET enabler will be developed through this strategy, in order to enhance the number of skilled people to meet the industrial needs, and to build a highly educated workforce. As a result, industrial involvement in the TVET



system was projected to assist the country in producing 35 per cent of high-skilled workers in the labour force and to improve educational and training programmes at universities and training institutes, in accordance with the industry's expectations and requirements.

Consequently, this policy has strengthened the motivation and initiative put in place by previous MDPs, in order to increase industrial engagement in Malaysia's TVET system (Economic Planning Unit, 2019).

### **3.4. Post Covid-19 Pandemic Policy (PENJANA & PEMERKASA)**

Since February 2020, Malaysia, like the rest of the world, has been affected by the global Covid-19 epidemic. Since March 2020, a series of Movement Control Orders (MCO) has been in place, in order to combat the spread of the virus. The government's MCO has contributed to the slowing of the country's economic growth (Leo and David, 2020). Many firms and industries have had to temporarily halt their operations, resulting in massive economic losses and increased unemployment (Idris, Andi Kele, Lily & Kim Lian, 2020).

In response to these concerns, the Malaysian government has announced a MYR250 billion emergency fund to support citizens, as well as small and medium businesses (SMEs) throughout the pandemic (Jalil, 2020). The government has also implemented a number of social-protection and employment-related initiatives, including the Prihatin Rakyat Economic-Stimulus Package (Prihatin) for social assistance and the National Economic Recovery Plan (Penjana), in order to stabilise the labour market (Rahman, Jasmin & Schmillen, 2020).

In Malaysia, the Covid-19 pandemic has impacted the local TVET system. Since skill-based professions are classified as vulnerable and require on-site employment, many TVET graduates and skilled workers have lost their positions. The country's Movement-Control Order prevents their worksites from operating (Rahman, Jasmin & Schmillen, 2020). The government has responded to this problem by implementing the Prihatin policy, which introduces time-limited wage incentives, to encourage staff retention. The wage subsidies help firms to pay their workers at a rate of MYR 600 per month for up to six months, during this important period, thereby ensuring that they remain employed (Malaysia Ministry of Finance [MOF], 2020). Consequently, the initiative is able to retain almost 2.75 million individuals in their jobs (Malaysia Prime Ministry Office, 2020). In addition, as a solution to unemployment difficulties, the government offers firms financial incentives to hire new workers by paying up to 60% (maximum of MYR 6000.00) of their new workers' monthly wage for a six-month period. Employers can also claim up to MYR 7000 for any training courses provided to their new employees (PERKESO, 2020). At least 300,000 new jobs are predicted to have been created as a result of this programme.

Since TVET has traditionally been Malaysia's most important tool for combating youth unemployment, the apprenticeship programme has also been employed as a tactic for assisting the country in reducing the societal impact of the Covid-19 pandemic. Through collaboration between industries and TVET training centres,

the government has budgeted MYR 2 billion to equip youth and jobless individuals with the critical skills relevant to the needs of the current job market (MOF, 2020).

These funds were used to provide training to at least 200,000 people, in preparation for future jobs. In addition, the government has funded upskilling programmes for industrial workers in crucial areas, such as electronics and information and communication technology at a number of TVET colleges (MOF, 2020). The government has established the Human-Resource Development Corporation (HRDF) to set up a database, so that all employers, TVET training providers, and individuals may receive better access to all of the government's incentives during the important pandemic issue (HRD Corp, 2021).

Through the Strategic Programme to Empower the People and the Economy (PEMERKASA), another MYR 20 billion will be injected by the government in 2021 to continue the time-bound wage subsidies, apprentices, as well as upskilling and new-skilling programmes, in order to assist people and those sectors still affected by the Covid-19 pandemic, while also boosting economic growth and supporting business (Malaysia Prime Ministry Office, 2021).

### 3.5 The Overall Findings

All the above policies of the Malaysian government have been analysed and synthesised; Table 1 summarises the findings. According to these findings, the Malaysian government has actively begun programmes to connect the country's TVET system with industry from 2010 to 2021. The National Dual-Training System (NDTS) is a significant TVET programme used by the government to connect the national TVET system with local industries, as shown in the table. The Malaysian government has regularly committed a large amount of funds to improve the collaboration between industries and the national TVET system across these time periods. The Malaysian government has also made a concerted effort to encourage industry's participation in the country's TVET system, by proactively revising and offering incentives to industries across all the policies implemented over the last ten years, in terms of levy claims, current industrial workers' benefits, and tax reductions.

To encourage more industrial involvement in the country's TVET system, the tax-reduction incentive for industries that contribute to TVET programmes has been quadrupled since 2016; and pay subsidies will be introduced in 2020. Those government policies and incentives have had a substantial impact on Malaysian human-resource development by promoting more industrial engagement in the country's TVET system, which includes NDTS, internships, upskilling and new-skilling programmes, as well as job-retention programmes (Department of Skills Development, 2020; Talent Corp, 2021).

**Table 1: Industries-TVET system partnership initiative, incentive, and impact across Malaysian Government policies**

olicies/Documents	10 <sup>th</sup> MDP	11 <sup>th</sup> MDP	SPV	PENJAN A	PEMERKA SA
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<b>Initiative</b>					
1. Industry-Led Bodies	/	/			
2. National Dual-Training Systems	/	/	/	/	/
3. Funding	/	/	/	/	/
4. Structural-Internship Programme		/	/	/	/
<b>Incentive</b>					
1. Tax reduction	/	/(double)	/(double)	/(double)	/(double)
2. Current workers' benefit	/	/	/	/	/
3. Claim of Levy	/	/	/	/	/
4. Wage subsidies				/	/
<b>Impact</b>					
1. Industrial involvement	/	/	/	/	/
2. Graduate employment	/	/	/	/	/
3. Job retention				/	/

Note: [/] refers to initiative/incentive/impact of government policies to strengthen industries-system partnership.

## 4. Discussion

### 4.1 Industry-TVET System Collaboration Model in Malaysia

According to Bonoli and Wilson (2019), there are three forms of ideal industrial involvement in the TVET system: (a) liberal; (b) corporatist; and (c) universalistic. A liberal model is one in which industries play a key role in selecting their level of involvement in the TVET system, which is based on labour market logic and supply and demand equilibrium. The liberal model's government involvement is modest; and it is unable to compel corporations to participate in human-capital development in those countries. Consequently, enterprises have low expectations of mutually beneficial collaboration between industries and TVET centres.

The government's active engagement to increase industrial involvement in the country's TVET system represents the second paradigm, which is a corporatist one. Most initiatives, on the other hand, take a diplomatic approach, by cultivating industry's interest and trust, in order to develop the country's workforce through various subsidies and incentives. However, the success of this strategy is heavily dependent on how eager corporations are to share the responsibility for human-capital development with the TVET system.

The last type, the universalistic, is represented by a government that practises a high level of macro-corporatism and which maintains that all groups have a role to play in the growth of the country. These countries have a defined policy on the extent to which industry should be involved in their country's TVET system, when it comes to training future workers.

According to an analysis of Malaysian government policy from 2010, the country's approach to increasing industrial participation in the country's TVET system is similar to the corporatist model proposed by Bonoli and Wilson (2019). The Malaysian government works with local industry, in order to generate human capital that fulfils current job demands; because it believes that industries should lead the national TVET system. Various incentives supplied by Malaysian government policies, such as tax reductions, training funding, and wage subsidies, have sealed the relationship between industries and the TVET system. Even during the pandemic, the government works with local industry to retain social and economic standing through apprenticeships, new employment, up-skilling, new skilling, and job-retention programmes, as well as offering major incentives to those companies.

#### **4.2 Strengthening TVET-industry's Cooperation in Malaysia: Adapting Lessons from the German Experience**

The Malaysian government has successfully implemented three main policies from 2010 and 2021: the 10th MDP, 11th MDP, and PENJANA. All of these measures have prioritised improving the country's TVET system through the National Dual-Training System programme. This demonstrates that the administration believes in the apprenticeship system; and it is eager to put it in place on a wider scale. Since 2004, the Malaysian National Dual-Training System (NDTS) has been used to improve the country's TVET quality, based on the German Dual-System programme (Leong et al., 2015). As a result, in order to effectively execute the Dual-Training System, lessons must be learnt from countries that have successfully implemented the system for their own development.

The effectiveness of the German Dual-Apprenticeship System in involving firms to offer facilities, funding, venues, and trained instructors for their vocational training programmes is a major sign that makes it an exemplar for effective collaboration between industry and TVET (Postiglione & Tang, 2019). Students have a training contract with industries, and industries are accountable for the training allowance. In addition, regulations relating to the Dual VET system are in place to prevent misuse and to limit the behaviour of industry and TVET institutions. One of the key elements for effective collaboration between industry and TVET programmes, according to the German Dual-Apprenticeship System, is a federal management strategy (Gessler, 2017). The Federal Institute for Vocational Education and Training (BIBB) in Germany is in charge of organising the country's training regulations and policies, which are produced collaboratively by companies and their employees.

They also have the Kultusministerkonferenz (KMK), a non-constitutional voluntary coordinating organisation for State ministries that are in charge of coordinating the creation of training curricula and State governments, based on real-world work procedures. Collaboration between training centres and industries is also recommended by the KMK. Through the introduction of the Department of Skill Development, the Malaysian TVET system has made the right decision by adopting this model. They are in charge of overseeing the

implementation of Malaysia's skill-training programmes, such as the NDTS, as well as developing training curricula. based on the current job-market needs (Department of Skills Development, 2021).

Malaysia also has its own National-Skills Development (i.e., based on the Malaysian Law Act 652), which was introduced in 2006 with the aim "to promote, through skills training, the development and improvement of a person's abilities, which are needed for his/her vocation; and to provide for other matters connected therewith." (Law of Malaysia, 2006, p. 7). They are used as a guideline for developing and implementing training policies.

However, having a specific Act that "requires" companies and schools to collaborate in the execution of vocational education and training, such as Germany's "The Reformed National Vocational Training Act" from 2005, is one element on which Malaysia's TVET system could improve effectively, in order to implement the NDTS, based on the German model (Federal Ministry of Education and Research, 2005). The Germans have specific expectations for their industry in terms of their contribution. The appropriate laws, such as the Law of Vocational Education, Labour-Promotion Laws, and Youth-Labour Protection Laws, serve to codify the interaction between industrial and TVET systems.

There are also specialised industrial regulations that outline their responsibilities, trainer qualifications, and dual apprenticeship-training procedures (Postiglione & Tang, 2019). As previously stated, the Malaysian government has a strong belief in its corporatist model, which fosters industry-TVET system partnership through incentives and appealing initiatives, resulting in only interested corporations participating. Some changes to the present Act could be made by requiring industry, particularly large and international corporations, to contribute to the development of the country's human resources.

## **5. Conclusion**

Finally, the Malaysian government has actively pushed local industries to participate in national TVET programmes, in order to ensure that the country's human-capital development matches the demands of today's employment market. Malaysia needs to produce more qualified employees, who are competent and ready to enter the employment market, as the country moves toward in becoming a developed nation. Consequently, industry's input has always been required, when it comes to creating and executing training and skills development. Based on industrial experience and collaboration measures, an analysis of Malaysia's three major policies (2010-2021) suggests that the country has had a considerably successful influence on industry-TVET collaboration.

Industry and TVET centres have formed effective relationships, especially through the National Dual-Training System (NDTS) programmes; while the Structural-Internship Programmes (SIPs) provide more important internship opportunities. During the difficult Covid-19 pandemic, the government has successfully collaborated with industry, in order to address social and economic difficulties, by providing various incentives and subsidies to affected



corporations, organisations, small and medium businesses, and single individuals. However, in order to boost industry's participation in Malaysia's TVET system, the legal framework should be changed, so that enterprises are legally compelled to contribute to the country's human-capital development.

## 6. Acknowledgement

This paper was part of a research project entitled "A framework to facilitate and sustain the win-win partnership between industries and training centres;" and it was funded by the 2018 Malaysian Ministry of Higher Education Fundamental Research Grant Scheme. (FRGS/1/2018/SSI09/UPSI/02/20).

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