

Reforming Technical and Vocational Education and Training (TVET) on Workplace Learning and Skills Development



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Abstract: *Technical and Vocational Education and Training (TVET) plays a crucial role in promoting high-skilled workers in Malaysia. In order to establish and manage TVET, it is significant to revisit in the existing TVET system to make a greater impact to improve TVET ecosystem including governance and management, teacher training, curriculum and pedagogical, social partners, and innovation in TVET provision in the context of private and public engagement. This paper applied systematic review as a methodology. The results, show that TVET ecosystem and interventions need to be implemented in line with the need of 21st century 'new economy' skills and challenges will always appear in hindering the success of preparing future skills demand. Hence, this paper further discusses the issues and challenges faced by Malaysia in reforming TVET for the world of work. Additionally, this paper covers strategic planning and recommendations on TVET development that could be beneficial to Malaysia.*

Keywords: *TVET, Workforce learning, Skills development, Competencies.*

I. INTRODUCTION

Technical and Vocational Education and Training or TVET is no longer a new term in today's changing world. Career and Technical Education (CTE), Workforce Education (WE) and Workforce Development (WD), Occupational Education (OE), Vocational Education (VE), and Apprenticeship Programs are other terms used by other countries in different context yet the expected outcome is the same, to prepare high-skilled work opportunities for the world of employment (International Labour Organization, 2010). Similarly, Inyagu (2014) defined TVET as skill-based approach to prepare workers for occupations and trades. TVET also is described by UNESCO-UNEVOC, a recognized international TVET center as "the acquisition of knowledge and skills for the work of work" (UNESCO, 2016). The role of

TVET in human resource development has also been highlighted as one of determinants of growth industries and jobs opportunities in the global skills race (Partnership for 21st Century Skills, 2008) which subsequently put TVET to another level of world perspectives.

Currently, TVET plays a crucial role to promote skill workers. Hence, it is clear that TVET is no longer being labeled as a second education yet it need some interventions to improve its missions, strategies, executions and monitoring in the global trends ecosystem. In other words, TVET governance and management, teacher training, curricula and pedagogical challenges, social partners and TVET as well as innovation in TVET provision in the context of private and public engagement are significant to be revisited in establishing and managing the existing TVET system with greater impact (International Labour Organization, 2010). Thus, the TVET interventions should be in line with the need of 21st century skills or 'new economy' skills. Although these skills are not new, they should include analytical and non-cognitive skills such as critical thinking, problem-solving, creative and innovation, collaboration, communication, entrepreneurship and others. Jayaram (2012) revealed that TVET institutions are not emphasized on the skills that employers need such as critical thinking and problem solving and the skills shortages should promptly resolved. In terms of human resource development, organization needs worker who are experience, competent and able to do multitasking jobs. Workers with greater experience and competence will held more different tasks in the organization compared to workers who do not have the skill sets.

Employers are demanding more of competent workers with good technical and soft skills, yet the skills gap is a growing problem for the global workforce. According to Salleh, Sulaiman and Gloeckner (2015), competency involves the ability to perform task with the combination of knowledge, skills, and attitudes. Similarly, Organisation for Economic Co-operation and Development [OECD] (2005) defined competency as workers capability to apply skills in specific context. At workplace, workers need a wide range of competencies to perform various tasks.

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Therefore, competencies are vital at workplace to measure workers readiness and it is required for workers to have a skills set for effective working performance in a real-world's task or activity at the workplace (Mohd Salleh, 2012; Mohd Salleh & Sulaiman, 2019; Mohd Salleh & Sulaiman, 2017; Mohd Salleh & Sulaiman, 2016; Mohd Salleh & Sulaiman, 2015). Thus, there is a need to reform the TVET education system to fulfill expectations of increasing worker competencies, reducing skills mismatch in the working place and improving demand and supply in labor market.

TVET programmes need to instill career-related skills such as critical thinking, problem solving, leadership, collaborative and others to balance with personal characteristic such as integrity, tolerance, ethics, flexibility, positive attitude and others in order to produce not only competence workers

but have the right attitudes. Particularly, TVET should takes on a prominent responsibility in this context.

TVET interventions are not limited to a classroom or institution per say, it can be strengthened if it is built within a networking system or TVET eco-system. Learning institution members can be the relevant group which can work collaboratively and constructively in meeting the common goals and missions on sustaining TVET development due to similar objective or outcome i.e. to produce competent workers. TVET demand is crucial among industries in Malaysia context. Therefore this paper will highlight some of the issues that potentially helps orienting TVET toward the world of work, helping smooth the transition from education to employment, and agility to update to the rapidly changing demands of world of work.

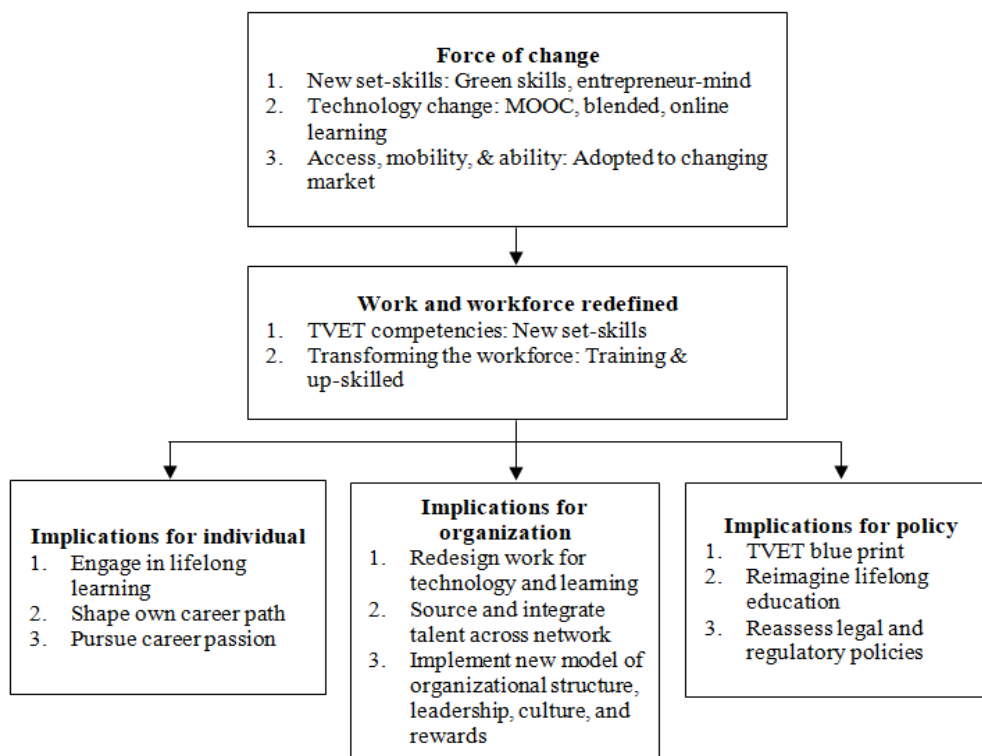


Fig. 1 - A framework for understanding TVET future of work (Source: Deloitte)

II. ISSUES AND CHALLENGES IN TVET

Today's TVET trends and practices can affect the economic landscape as well as the supply of skill workers within its vicinity if there are no actions taken by the TVET players. Labor of advanced skills, quantity and quality of skills, access to education, and occupational profile are some of the critical current trends and practices on TVET particularly (Asian Development Bank, 2015). These challenges can give major implications on TVET progression in preparing future skills demand and expectations on TVET systems in Malaysia.

Quality TVET help develop the worker's knowledge and skill-sets in a broad occupational area requiring technical competencies and specific occupational skills. In addition to these technical competencies, new skill-sets have emerged and in demand such as green skills, entrepreneur-mind, thinking skills, and others. These new skills are being associated with

the sustainable development. In general, sustainable development is about progressing economic, social, and environmental collectively and TVET involvement is significant. Mertineit (2013) posited TVET is assigned as central role in developing and implementing the sustainable development especially in green economy. Additionally, making quality training opportunities available to TVET workers, in particular young workers who enter job market, helps to support sustainable development and decent work. Rapid technological change influences people's life including learning. New media technologies emerge and bringing a transformation in the way people communicate. Even better, technologies give access of education within reach to many individual including workers. As a result, technologies for teaching and learning becoming more advanced and sophisticated.

TVET institutions can offer non-conventional courses using massive open online course (MOOC), blended or hybrid learning, online learning and other similar platform to enhance workers knowledge and skills. Using these technologies, knowledge and skills can be learned and improved through personal and professional development such as short courses, upskilled course, workforce training, and others offered by TVET institutions and this is called lifelong learning. New technologies can provide access and opportunities for this continuous learning process and they also can provide opportunities for people to explore new knowledge, skills, methods, techniques and more.

Considering how fast the workforce growing, strengthening the access, mobility and ability of TVET workers to adapt to changing market will be the top priority. TVET should begin with a broad base articulation within the education system and between learning institutions and the world of work. TVET will permits access to other aspects and areas of education at all levels, from primary to higher learning institutions. The adaptability of TVET workforce should be encouraged through the practice of transversal skills and competencies based through TVET programs that incorporate didactic learning and operatorships. Figure 1 explained how to understand TVET future of work and expected outcome to the worker, organization, and policy.

These demands TVET workers to update their competencies and benefit from innovation and investments in new technologies, training, and up-skilled to enables them to be more competitive in the global. Providing TVET workers with learning opportunities throughout their lives is an ambitious but necessary undertaking. The flexibility and incentives of TVET need to be enhanced to responds more promptly to new and emerging skills needed. TVET also have a potential to improve the quality of life by creating a learning culture that permits workers to expand their intellectual horizons, to acquire and to constantly improve professional skills and knowledge in their work setting. Increasing demand in competent workers in the workforce will likely enhance the shift from routine tasks to more creative work, and TVET will see the emergence of hybrid jobs that increasingly integrate technical, design, and project management skills.

III. METHODOLOGY

This research applied systematic review as the methodology. In systematic review, researchers used quality assessment as a basis for excluding all studies. This methods allowed researchers to identify published and unpublished research documents in systematically way. Previous research studies or secondary data were collected, examined, synthesize, and summarized to find the evidence that fits specified criteria. This research approached more on retrospective because all the data and findings are already in place. Furthermore this step-by-step process provide a complete and thorough summary of current finds that relevant before proceed to perspective research. This process also allowed researchers to describe the quality of evidences and make conclusions and discuss the strength of these conclusion.

IV. RESULT AND RECOMMENDATIONS

It is important for Malaysia to propose all TVET agencies and stakeholders into one statutory body or center that can implement trans-regional agenda such as TVET training,

research and innovation, curriculum and instruction, assessment, mobility, accreditation, lifelong learning, employability, workforce forecasting, and others that will benefit TVET as a whole. The establishment of Malaysia Research Institute for Vocational Education and Training (MyRIVET) is at right time. A TVET statutory body such as MyRIVET can be centralized body to coordinate, monitor, and profile the TVET movement and coordinate all activities related to TVET. MyRIVET can offers a wide range of TVET programs and trainings that can offer exclusive opportunities for all TVET members. In such, activities including workplace trainings are exceptionally important and effective means for competent workers in labor market which could enhance high quality and productive manpower and ensure minimum standards are preserved. While the established national research institute such as MyRIVET is a good progress, the government or local universities also should consider research center or excellent center at universities level to support MyRIVET and also becoming Inter-Agency Group that provide database for MyRIVET. Faculty of Technical and Vocational Education at Universiti Tun Hussein Onn Malaysia had made an initiatives and progress on this matter by re-established Advance Centre for Technical and Vocational Education (ACTiVE) to cater TVET agenda at local, national and regional level. This strategic partnership not only benefit MyRIVET on research findings especially on local, national and regional level but also could be significant to international level.

TVET plays a significant role in Malaysia progress towards becoming a developed nation. Increasing the impact of TVET interventions, especially at local, national and regional level by providing expert and consultancies. For this reason, it is important for TVET institutions to integrate new intervention such as green skills into TVET programs and curriculum. As green skills developed and highly needed by the industries, TVET institutions should actively participate and support to ensure the implementation of sustainability development goals is succeeded such as revising curriculum, improving research activities as well as strengthening network among TVET players

TVET institutions should look back at the past couple of years, re-evaluate and suggests improvement for the future of TVET. Issues related to TVET in lifelong learning, peace and reconciliation, gender and equity, sustainable development and others should be offered. New approach and delivery should be implement in teaching, learning and professional development. Therefore, TVET institutions should offer TVET professional development courses and training to regional members by using new technologies for sustaining TVET development among ASEAN countries. Recognition Prior Learning (RPL) should be implemented and emphasized at TVET institutions to give access, progression, support, and career opportunities for adult learners and to provide experienced workers more frontline access to certification.

Mobility of cross-border for workers is not a new concept in employment. It has been implemented in Europe for a while. Hence, ASEAN TVET institutions should take the opportunities to enhance the process of high-skilled workers integration and cohesion to support global economic and workforce demand.

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However, ASEAN countries should first initiate the workers cross-border cooperation approach to legalize the process and documents such as work permit, levy, and others to foreign workers in each country. As different countries in ASEAN implement the mobility, a number of different methods, techniques, and format were developed to express the approach. The mobility concept not only for workers nevertheless it should in broaden scope including for academic, research, public-private partnership, teacher training, and others. In term of training for TVET teachers, it is time for ASEAN regional members to implement Teacher Training TVET (TT-TVET) competencies standard.

This competencies standard is to provide guideline to ASEAN regional members and at the same time it will improve TVET teacher performances that align with industrial advancement. Likewise, the TVET curriculum can be improved by following the competencies standard. With such standard, ASEAN members can validate the performances and qualities of workers by each country are compatible with other country members.

V. CONCLUSION

Although TVET is perceived important by ASEAN members nevertheless the implementation of the programs and curriculum is decentralized. Each country has its own interpretations of TVET. This situation eventually creates gaps on knowledge and skill especially when workers enter labor market in other country within ASEAN region. Thus, collaborations among ASEAN members need to be strengthened using existing platform such as Regional Association for Vocational Teacher Education in East and Southeast Asia (RAVTE), Regional Cooperation Program to Improve the Training of TVET Personnel (RECOTVET) or ASEAN University Network (AUN). RAVTE should prepare strategic planning to propose and implement a statutory body to cater ASEAN TVET needs. While, RECOTVET should emphasize more on TT-TVET for regional needs that follow global trends. Currently, AUN establishes as regional educational standard for quality development, academic collaboration, youth platform, policy platform, university leaders' dialogue, and capacity building (AUN, 2016). A legislative body like AUN should consider how to formulate and promote TVET under their jurisdiction to harmonize the TVET implementation among ASEAN country members. With all combination of efforts for TVET missions, ASEAN countries can become the strongest TVET players in the world.

In Malaysia context, it is time to propose and implement integrated of all TVET agencies and stakeholders to be centralized under MyRIVET to fulfill the TVET aspiration in Malaysia. In addition, MyRIVET could also become an accreditation body that control the quality assurance and recognizes programs offer by the TVET institutions in Malaysia. Considering the role of TVET in improving the employment prospects of young men and women, and in minimizing current and future skills gaps, this TVET integrated center will focus on helping target population by giving them accurate information.

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