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Transforming TVET in Malaysia: Harmonizing the Governance Structure in a Multiple Stakeholder Setting

Abstract

Malaysia is in need for highly-skilled human resources to close the present demand-supply gap in various industries, particularly those driving economic transformation. The government has determined that the Technical and Vocational Education and Training (TVET) sector as the main route in providing highly-skilled human resources and also one of the key drivers of the economy for Malaysia to become a high-income nation. While this study recognizes that initiatives have been taken to continuously improve the sector through the TVET transformation programs, it is imperative that the governance issues faced by the key stakeholder are systematically addressed to ensure that the operating and delivery system can be optimized. This paper provides an overview and an analysis of the TVET transformation programs and the governance issues including several challenges to the development of the TEVT sector. A review from various published documents to the present has been used to provide a comprehensive summary of literature of Malaysia's TVET transformation and governance issues. This study also hopes to suggest certain measures for an effective governance of the TVET sector so that the decisions and actions of multiple stakeholders towards driving the performance and quality of this sector can be harmonized.

1 Introduction

The need for strengthening TVET has been widely acknowledged in numerous countries and unions (Yazçayır & Yağcı 2009) due to technical innovation and globalization (Wilson, 2001), achieving a higher income (ANTA 2002), and thus decreasing poverty (ILO 2012). All of these concerns will lead to the transformation of TVET system to provide workforce with the competences and skills needed for a diverse and expanding market economy as well as strengthening the civil society (EGYPT 2012). In Malaysia, the quality and skills of human resources is very crucial to the success of economic transformation as well as realizing Malaysia's vision 2020 of becoming a developed nation. According to the Economic Planning Unit (EPU), the demand for labor especially for the TVET sector is expected to increase with the introduction of National Key Economic Area (NKEA). NKEA will require a workforce of up to 3.3 million by 2020 of which 1.3 million are to be TVET graduates. The focused sectors are Tourism, Retail, Greater Kuala Lumpur Development, Healthcare, and Education. However, the current growing labor supply is at 2% per year. If the government would not take any specific initiatives on the labor supply, it would not be able to meet the demand which are estimated 350,000 shortfall of workforce by 2020. Therefore, the needs of 1.3 million skilled workforce in TVET sector would not be met. Furthermore, currently only

28% are skilled workers from an overall workforce of 12 million compared to a minimum of 40% that is targeted at by the government for the year 2020 (JPK 2012b). Therefore, TVET should be transformed to be more flexible in their capacity to anticipate and forecast skills needs so that the demand for highly skilled manpower can be achieved (MOE 2011).

1.1 Historical background of TVET in Malaysia

Technical and vocational education and training (TVET) had already been introduced in the period of pre-independence. The history of technical and vocational schools began with the establishment of a Trades School in Kuala Lumpur in 1926, aiming at the provision of trades education to the youth. In 1930, the school was expanded to Ipoh, Johor Bahru and established in Penang in 1932. Trades school is basically training the basics of carpentry, repairing machinery, electrical wiring and construction building with three years courses offered. After independence, the government started to give an enormous concern on TVET, which is expressed from the First Malaysia Plan 1965-1970 to the Tenth Malaysia Plan 2010-2015. During the First Malaysia Plan period, a number of upper-secondary vocational schools were established for the first time. The main function of the vocational schools is to supply skilled technicians, craftsmen and artisans urgently needed by the agricultural, industrial and commercial sectors in economy (JPM 1965).

The establishment of TVET institutions was not limited to vocational schools only. Other TVET institutions such as the Industrial Training Institutes (ITI), Polytechnics, MARA Vocational Institutes, National Youth Development Corps (NYDC) and the Center for Instructor and Advanced Skill Training (CIAST) have been expanded or established to provide technical and vocational education and skills training (JPM 1970; JPM 1975; JPM1985; JPM 1980). Furthermore, the increase of foreign investment through multinational companies in Malaysia resulted in the introduction of new production processes and technologies and in an increased demand of a highly competent workforce with advanced skills. In consequence two advanced skill training institutions were established in cooperation with Germany and France: the German Malaysia Institute (GMI) and Malaysia France Institute (MFI)(JPM 1995). In the 1990s, the number of students entering technical and vocational schools was increasing. Thus, in 1995, there had been some changes in the TVET system including changes in the restructuring and upgrading of 69 secondary vocational schools (SMV) to technical schools (SMT). This reform was not only restricted to the technical and vocational schools alone, but also to a number of institutions that have as well the objective to help students to get a job based on the skills acquired from technical and vocational training, which are Community Colleges, ITIs, polytechnics, and MARA Vocational Institutes (IKM).

In order to support the implementation of an enhanced quality in technical and vocational education and training, the National Industrial Training and Trade Certification Board (NITTCB) was established in 1971. The NITTCB serves as a coordinating agency among the involved government agencies and between the government and the industry. NITTCB also provides common trade standards and improved syllabi and course structures for vocational training institutions. NITTCB also evaluates the quality of training providers and training

courses. It was reorganized in 1989 (JPM 1990) and renamed into National Vocational Training Council (NVTC), but its objectives with respect to quality remained. In 2006, with the new enactment of National Skills Development Act (NASDA) 652, NVTC was restructured to become the Department of Skills Development (DSD) under the Ministry of Human Resources (MoHR) with the responsibilities

- to develop and continuously revise training standards, skills training and the certification system,
- to promote skills training and
- to coordinate strategies and skills training programs.

At present, DSD has accredited 1,068 skills training centers, with 101,450 certificates being awarded in the year 2012 including diploma and advanced diploma (JPK 2012a).

For the training purposes, there was a standard that has been used, known as National Trade Skill Standard (NTSS). The NTSS was developed by NITTCB in close cooperation with the industry in 1976 to provide skilled manpower to suit the needs of skilled manpower. Student who achieved the competencies required in the NTSS will be awarded National Trades Certificate (NTC). Technological development and economic changes have required the existing standard to be revised. In 1993, the NTSS was replaced by the National Occupational Skills Standard (NOSS), resulted an introduction to a new certification scheme known as Malaysia Skills Certificate (MSC) (Othman 2003; JPM1995). The new system gave recognition to skills acquired through training and job experience. To improve the quality of skills training, the government through DSD embarked on the NOSS development with the new format in 2005. In 2012, about 1,439 NOSS has been developed based on the occupational analysis done by DSD. It also covers 20 skills sectors in the TVET (JPK 2012a). Subsequently, in July 2005, the National Dual Training System (NDTS) was introduced as an alternative system to strengthen the training delivery (JPM 2000; JPM 2005). The German-based system which is an industry driven concept will ensure the training provided is in line with the industry requirements. The main characteristic of the NDTS is the cooperation between training institutions and private companies such as Mercedes, Toyota, Tesco and so on. The training was carried out 70%-80% at the industry and 20%-30% at the training institutions. It referred to the National Occupational Core Curricula (NOCC) as a foundation which was different from the NOSS. In the year 2012, about 138 companies were involved in NDTS (JPK 2012a).

Today, the government continuously formulates, promotes and coordinates TVET strategies and programs which are in line with Malaysia's economic, technological and societal needs. In the 10th Malaysia Plan 2010-2015, TVET has been chosen as a key component to achieve the country's goal as a high-income nation by the year 2020 (JPM 2010). This is to make sure that there is a constant, adequate and timely supply of multi-skilled workers that will able to meet the country's development. Great emphasis on improving the quality of education and skills-based training, increase awareness as well as improving the perception of TVET and strengthen the collaboration with industries for the better recognition were among the further steps to be taken. Nevertheless, these transformation and endeavors wasn't enough to converse how TVET could be reformed to a better system, particularly if the country needs to

compete at the international level in today's era of globalization. Most importantly, the governance of the TVET system should be strengthened and well aligned with the country's vision. Based on that, this article will provide a review on the TVET transformation program within several ministries and some issues and constraints regarding the governance in TVET system. The constraints that exist in the governance are very important to be acknowledged so that a comprehensive actions could be considered in improving the quality of the governance system.

2 Method of analysis

This review paper has investigated the information in the field of TVET system in Malaysia with focus has been made to the transformation program and governance system across several ministries. This study includes federal government reports, proceeding papers, journals and electronic references. For a strategic search of the articles that were published in terms of governance in TVET, three journal databases were considered which are EMERALD, ProQuest and ScienceDirect. The search was conducted using five keywords; Technical and vocational education, skilled workforce, governance, TVET policy, and transformation. By applying the document analysis technique, assorted documents has been used to acquire the general idea and perspective in this study. According to Bowen (2009), the document analysis should involve skimming (superficial examination), reading (thorough examination) and interpretation so that the finding can be analyzed and summarized in a comprehensive way. Merriam (2002) also states that one of the strategy to gather and analyze the data can be built around documents which is the entire study can be performed through reviewing and evaluating the documents. The similar method was also being used by Ashari, Rasul, & Azman, (2014) in exploring the student career choice in Malaysia.

3 Discussion

Before we discuss the governance issues that need to be highlighted, it is better to catch a glimpse of the transformation programs that exist in the TVET system so that the similarities and differences between each of the agencies that perform transformations can be assessed in a meaningful way. Several journals, proceedings, and reports including Vocational Education Transformation (MOE 2011), Polytechnic Transformation Plan (JPP 2009; JPP 2012), Community College Empowerment Book 2013-2015 (JPKK 2012), MARA Strategic Plan (MARA 2011; Din 2011) and several reports from DSD (JPK 2012a; JPK 2011; JPK 2012b) were being used to acquire the general idea and perspective in this study.

3.1 Transformation in TVET

Transformation of TVET is a determination of re-engineering the existing vocational education system to build a new system of vocational education, which can contribute to the high-income country. It was designed especially to produce a holistic human capital capable of facing any challenge, whether at the national or global and to provide a highly trained work-

force to meet the country's needs in the job market. A holistic human capital can be achieved when individual self-actualization arises. This can be done by developing technical and cognitive element in TVET. Consequently, it will built a spiritual and high morality person for life long application and implicates their physical, emotional and intellectuality.

TVET transformation focuses on employability components of its future graduates. The success of this transformation can be seen when it provides a significant contribution to the government's agenda to make Malaysia a high-income country. Currently, the transformation of TVET under several agencies has been introduced in order to strengthen vocational and technical education system at par with others (JPP 2009; MOHE 2012; Dason et al. n.d.), while MARA and DSD had strengthen their role to cope with the challenges.

Ministry of Education led the change through the transformation program on technical and vocational schools, polytechnics and community colleges. At the school level, it will involve two aspects, namely the Basic Vocational Education program (BVE) and Vocational Colleges (VC). Basic Vocational Education (BVE) was introduced as a stream of education in lower secondary school system from Form 1 to Form 3. The implementation of the pilot program was conducted in 15 selected schools starting 2012. The curriculum implies active participation in a direct and practical way with the subject trained (hands-on), with reference to the National Occupational Skills Standard (NOSS). Students will go through three levels of competencies within 3 years to enable them to get Malaysian Skills Certificate (MSC) Level 2 issued by the Department of Skills Development (DSD), Ministry of Human Resources. This transformation would provide opportunities to students who are hands-on and interested in TVET and are academically weak and it provides greater career opportunities to the students to avoid dropping out of the current mainstream education.

As BVE focused on lower secondary school, VC provides an opportunity to the upper secondary school students that have interest in TVET stream with the diverse courses offered at the colleges. This means the feeder for VC will come through the BVE. The most important aspect can be seen when the VC leavers directly being awarded TVET diploma after 2 years training that meet the MSC Level 3 and 4 rather than they have to complete their training in the skills training institutes such as ITI and MARA vocational institutes in order to get the same level of certification.

At the higher education level, polytechnic transformation roadmap aims to develop human resources with emphasis on creativity and innovation. The concept of transformation include to be a leading institution for TVET education, produce employable graduates and build the positive perception towards the polytechnics. Aspects covered include governance, process design, delivery system, curriculum development, quality assurance, the development of competent instructors, quality resources, continuous innovation and recognition by Malaysia Qualification Agency (MQA). Three indicators has been identified to the success of Polytechnic Transformation. First, the polytechnics become the main TVET institutions at the regional level. Second, at least 85% of polytechnic graduates are employed or continue to further their study within six months after graduation. Finally, 50 percent of school leavers (MCE) make polytechnic as their first education pathway.

Another TVET providers that involve in the transformation program is community colleges. The government has strengthened the action plans which focused on high income by increasing skill-oriented programs to produce competent workforce, retrain unskilled workers, and upskill the trainers. In addition, community colleges will intensify collaboration with other TVET related agencies and private sector in the development of the curriculum as well as the knowledge and technology transfer through apprenticeship. Moreover, the number of graduates from entrepreneurship program will be increased and the public will be assured that the government will provide conducive learning environment in order to provide quality services to the local community. Upon successful implementation of this transformation program, it is expected to contribute 35% of skilled workforce that will offer a maximum impact on the economic development of local communities with knowledge-based skills, creativity, and innovation.

To cope with the drastical change of several TVET institutions, a new system of governance is required to stay relevant and responsive. Therefore, regulating agencies need for strategic alignment with these changes. For example, the Council of Trust (MARA) has materialized their Strategic Plan 2011-2015 that enshrine comprehensively in MARA Transformation Strategic Framework 2011-2020. MARA Strategic Plan has some substances. One of them is to make students achieve the objectives of a global human capital with integrity and innovation. Secondly, the education was transformed to create business leaders, entrepreneurs and professional who can compete globally as well as producing excellent graduates in TVET. The third substance is to strengthen the education platform from secondary level of the college and pre-university to provide a strong foundation to send students abroad for undergraduate and also postgraduate program. Finally, the reinforcement of TVET education starting from basic certificate level to the diploma and advanced diploma level will be carried out through a bridging program which handled by MARA University.

The second regulating TVET agency is DSD. Most of the initiatives taken by DSD are following the directive and suggestion stated in the Tenth Malaysia Plan. The government has recognized the need to create comprehensive TVET system to meet the needs of the labor market and to enhance economic growth. The 10th Malaysia Plan has been clearly declared that four strategies will be implemented during the plan period. The perception towards TVET will be improved to attract more trainees, highly effective TVET instructors will be developed, the quality of TVET curriculum will be upgraded and harmonized in line with the industry requirement, and finally the delivery of TVET will be streamlined. Pang (2011) and Mohamad (2011) have underlined a few initiatives to streamline the implementation of TVET in Malaysia. DSD has been appointed as a single agency to harmonize the TVET standards and curriculum, accreditation body for skills sector and have to ensure TVET offering matches employability requirement by appointing and manage the Industry Lead Body (ILB). The ILB will proactively ensure the relevance of NOSS. Malaysian Skills Certificate (MSC) issued by DSD will be adopted as the national certification for TVET. Since MSC are not fully recognized by the higher education institutions and Board of Engineers Malaysia, a Board of Technologist Malaysia (MBOT) will be established. It will not only accelerate the recognition of MSC but also will cover the Diploma and Degree in Technology offered by

other higher learning institutions. To assist providers in attracting students, Skills Malaysia Invite was established. This program will encourage international students to enroll in various selected TVET institutions. MQA and DSD also will put an effort to standardize pathway from TVET institutes to university by clarifying educational and professional pathway. A summary of transformation program and initiatives by respective agencies are shown in Table 1 below:

Table 1: **Some of transformation focus and initiatives by respective TVET agencies**

Ministry	Implementing agency / Regulating body	Transformation focus / initiatives
Ministry of Education	Technical and Vocational school	<ul style="list-style-type: none"> • Introduction of BVE and VC • TVET diploma that meet MSC Level 3 and Level 4.
Ministry of Education (previously Ministry of Higher Education)	Polytechnic	<ul style="list-style-type: none"> • To be main TVET institution at the regional level • Employability – at least 85% employed within 6 months after graduation • To attract 50% of school leavers
Ministry of Education (previously Ministry of Higher Education)	Community college	<ul style="list-style-type: none"> • Focused on high income • Graduate entrepreneurship program
Ministry of Rural and Regional Development	MARA	<ul style="list-style-type: none"> • Global human capital with integrity and innovation • Creating business leaders, entrepreneurs and professionals • Bridging program from the basic certificate to the advanced diploma
Ministry of Human Resources	DSD	<ul style="list-style-type: none"> • To be a single agency to harmonize the TVET standards and curriculum • Accreditation body for skills sector • MSC as the national certification for TVET • Establish SkillsMalaysia to change public perception towards TEVT and to attract students to join TVET

3.2 Current governance issues

Since the 1st Malaysia Plan until the newer 10th Malaysia Plan, the TVET sector was divided into two terms i.e. education and training. The term ‘education’ is being used by the Ministry of Education which is responsible for the polytechnics, vocational colleges, technical schools, and community colleges while the term ‘training’ is being used by various ministries such as the Ministry of Human Resources, Ministry of Youth and Sports, Ministry of Rural and Regional Development and the Ministry of Agriculture and Agro-Based Industry. Each

ministry own and operate a varying number of institutes for example ITIs, National Youth Skills Institutes (IKBN), MARA vocational institutes, and private skills training institutions. Another description was also made by Pang (2011) and Ahmad Othman (2003) who highlighted that TVET system in Malaysia were divided into three streams i.e. higher education, *technical and vocational* education and *vocational skills* training. The separation of terms and the highly fragmented administration could result in poor coordination and duplication of responsibilities and also will boost up the government funding in the TVET sector.

In terms of accreditation, there was another accreditation body besides DSD in Malaysian education system. DSD, which is mentioned earlier, performs accreditation for the skills sector while Malaysian Qualifications Agency (MQA), a division within Ministry of Education performs accreditation for the vocational and technical sector as well as academic sector. The existing of the two bodies with separate standards and process for accreditation resulted in multiple qualification systems. Segregation between skills and technical and vocational sectors by the Malaysian Qualification Framework (MQF) creating confusion among students and the employers on the value of the certificate (Pang Chau Leong 2011). Overall, the unique fragmented TVET landscape including multiple qualification systems, with no central or single agency to coordinate the system will make each provider act in silo thereby creating limited synchronization and harmonization of TVET sector. Although there was a platform to coordinate the delivery system through National Skills Coordination Council (MPKK2) (JPK 2012a), the diverse vision/purpose in offering TVET education will create a wide difference in the policy decision and training delivery.

3.3 Harmonizing the governance issues

Different ministries manage their own TVET institutions. There are diverse standards of performance with limited authority and responsibility. Each ministry also has different qualification system with non-uniform curriculum and standards, thereby creating confusion among students and employers in terms of the certificates issued. In certain circumstances, the certificate is offered at a very basic level with little value added and sometimes not relevant to industry needs. While efforts have been made to establish a collaboration between ministries but different policy often limits the flexibility and mobility of students to a higher level across institutes under different ministries.

The Tenth Malaysia Plan has outlined three important issues concerning to TVET education as follows:

- DSD has been appointed as a single agency to upgrade and harmonize the TVET standards and curriculum. It also will become an accreditation body for skills sector;
- Malaysia Skills Certificate (MSC) issued by DSD will be adopted as the national certification for TVET; and
- Pathway from TVET institutes to university will be standardized by clarifying educational and professional pathway.

However, when the transformation plan was executed at the agency level, as mentioned in 3.1, many aspects were not fully accounted for. Ministries administer plans without clear insight or understanding of other ministries' transformation plans except for the BVE and VC. Furthermore, DSD was not involved with the direction and planning of relevant agencies. This is due to the dissimilar policies and requirements of each other. Should proper transformation plan for each ministry or agency consider the recommendations proposed in the Tenth Malaysia Plan. In terms of harmonizing the TVET standards and curriculum, the DSD still do not have the authority to design the same standard and curriculum for all TVET providers. Each ministry still operates independently with different standards for capacity planning and curriculum development. This will result in duplication of responsibilities in calibrating learning outcomes for TVET sector. Regarding the single accreditation body for *skills* sector, although both *skills* and *technical and vocational* sectors fall under the TVET sector, they still be separated within the MQF. Meaning that, the accreditation system still applies to similar TVET offerings. *Skills* sector still be administered by the DSD and those in *technical and vocational* sector administered by the MQA. While DSD administers the skills sectors, there is still training providers who prefer not to be accredited by the DSD. For example, MARA vocational institutes have their own plan to contribute to the production of TVET certification. This will limit the collaboration and sharing of best practices between the agencies.

In terms of national TVET certification, adoption of MSC issued by DSD as the national certification is still unfulfilled. The original government intention is to see various ministries and institutes offer their own certificates which comply with standards set out in NOSS. Unfortunately each agency and ministry, are still comfortable and prefer to maintain their own certification. Only the technical schools and vocational colleges took the initiative to produce TVET certificates that meets the MSC requirements. Finally, the transformation program across ministries are still not having clear educational pathways. For example, students are unable to transfer credits between different institutes under different ministries and only limited qualifications can be used to enter higher education, resulting difficulties for students to have a clear understanding of their educational pathways. So, there is a need to enhance the governance and delivery of the MQF to increase clarity of the educational pathway within ministries.

4 Conclusion

Some of the issues regarded to the TVET governance lead to the issues faced by the employers. Multiple ministries and TVET certifications create confusion among employers on the quality and also difficult to determine the starting wage. Wide variation in the standards is worrying as this may lead to the continuity of poor perception of TVET education among public. In term of recognition, many employers do not recognize the value of skills training or may not fully understand or be aware of the qualifications. Subsequently, it will affect the government initiatives to make sure the TVET institutions to have a closer link with the industry. So, there is a need for a streamlined qualification system that ensures a minimum standard is met and strengthen the confidence of the employers and students in the TVET

sector. It is also crucial to establish a central body to govern and monitor the TVET sector so that the implementation of transformation program could be harmonized and will perform at optimum delivery system. In this case, the government should redefine the governance of the TEVT sector to drive the performance and the delivery system. Effective governance of the TEVT sector is crucial to unify decisions and actions of multiple stakeholders towards driving the performance and quality of this sector.

The governance structure for the TEVT sector would be one that demands higher performance standards from institutes, greater coordination across ministries, greater participation from the private sector and reduced complexities. The government should make sure all ministries involve in delivering TVET concern about the Tenth Malaysia Plan important outlines such as:

- DSD as a single agency to upgrade and harmonize the TVET standards and curriculum and become an accreditation body for skills sector; and
- MSC will be adopted as the national certification for TVET.

Should DSD become a single body to harmonize the TVET sector, it will be responsible for providing license, registering and auditing institutes, accrediting courses, engaging industry and managing skills standards and providing inputs on the skill requirements of the economy. Then, it also is possible to merge the Skills and Technical and Vocational sectors of the MQF. This is due to the current MQF that distinguishes between the Skills, Technical and Vocational and Higher Education sectors. This would therefore result in the MQF consisting of only 2 distinct sectors; the "Technical Education and Vocational Training" sector and the "Higher Education" sector. The higher education sector could be managed by MQA focusing only for academic. Finally, MSC automatically can be adopted as the national certification for TVET since it will be certified by the DSD. Overall, the existing of a new single body to manage TVET will provide a better coordination and oversight at all levels of the TVET sector, resulting a complete view of TVET offerings across the country as well as efficiency in resource allocation. Hence, given the economic significance of this sector, it is crucial to harmonize the governance structure by establishing a central body to govern and monitor the TVET sector.

References

ANTA (2002). Environmental scan for the national strategy for vocational education and training. Australia. Online: www.anta.gov.au/dapStrategy.asp.

Ashari, Z.H.M., Rasul, M.S., & Azman, N. (2014). Hubungan Individu, Persekitaran dan Kebolehsesuaian Terhadap Pemilihan Kerjaya Pelajar Sistem Persijilan Kemahiran Malaysia (SPKM): Suatu Analisis Kandungan. *Sains Humanika*, 2(1), 135-144. Online: www.sainshumanika.utm.my.

Bowen, G.A. (2009). Document Analysis as a Qualitative Research Method. *Qualitative Research Journal*, 9(2), 32.

Dason, A., Hamzah, R., & Udin, A. (n.d.). Hala Tuju Pendidikan Teknik dan Vokasional ke arah Memartabatkan Falsafah Pendidikan Negara, 1–13.

Din, A.R. (2011). MARA peneraju transformasi bangsa-Keusahawanan dan pendidikan global. *Mingguan Malaysia*, 14-15. Online: www.utusan.com.my.

Egypt (2012). Egyptian TVET Reform Policy. Egypt.

ILO (2012). TVET Reform: Design an inclusive skills development program. Bangladesh. Online: www.ilo.org/publns.

JPK (2011). Rationalizing the Implementation of Technical Education and Vocational Training (TEVT). Final report. Putrajaya, Malaysia.

JPK (2012a). Laporan Tahunan Jabatan Pembangunan Kemahiran (JPK) 2012. Putrajaya.

JPK (2012b). Program SkillsMalaysia Partnership: Laporan Tahunan 2012. Putrajaya.

JPKK (2012). *Pemeriksaan Kolej Komuniti 2013-2015*. Jabatan Pengajian Kolej Komuniti, (ed.) Putrajaya, Ministry of Higher Education. Online: www.jpkk.edu.my.

JPM (1965). First Malaysia Plan 1966-1970. Kuala Lumpur.

JPM (1970). Second Malaysia Plan 1971-1975. Kuala Lumpur.

JPM (1975). Third Malaysia Plan 1976-1980. Kuala Lumpur.

JPM (1980). Fourth Malaysia Plan 1981-1985. Kuala Lumpur.

JPM (1985). Fifth Malaysia Plan 1986-1990. Kuala Lumpur.

JPM (1990). Sixth Malaysia Plan 1991-1995. Kuala Lumpur.

JPM (1995). Seventh Malaysia Plan 1996-2000. Kuala Lumpur.

JPM (2000). Eighth Malaysia Plan 2001-2005. Putrajaya.

JPM (2005). Ninth Malaysia Plan 2006-2010. Putrajaya.

JPM (2010). Tenth Malaysia Plan 2011-2015. Putrajaya.

JPP (2009). *Halatuju Transformasi Politeknik* Jabatan Pengajian Politeknik (ed.). Putrajaya, Ministry of Higher Education. Online: <http://politeknik.gov.my>.

JPP (2012). Teks Ucapan Amanat Tahun Baharu 2012. Ketua Pengarah Jabatan Pengajian Politeknik, 1-25.

MARA (2011). Surat Pekeliling Bahagian Perancangan Korporat Bil. 1/2011: Pelaksanaan Pelan Transformasi Strategik MARA 2011-2020. Kuala Lumpur: MARA.

Merriam, S.B. (2002). *Introduction to Qualitative Research*. First Edit., San Francisco: Jossey-Bass.

MOE (2011). *Pelan Strategik Transformasi Pendidikan Vokasional*. Putrajaya, Ministry of Education, Malaysia. Online: <http://www.moe.gov.my>.

MOHE (2012). *Pemeriksaan Kolej Komuniti 2013-2015*. Putrajaya, Ministry of Higher Education.

Othman, A. (2003). *The Role of The National Vocational Training Council in The Management of Vocational Training in Malaysia: A Critical Evaluation*. Batu Pahat, JOHOR: Kolej Universiti Teknologi Tun Hussein Onn.

Pang Chau Leong (2011). *Key Reforms in Revitalising Technical and Vocational Education and Training (TVET) in Malaysia*. In: *Regional Conference on Human Resource Development Through TVET as a Development Strategy in Asia*. Colombo, 4-5.

Ridderbusch, K. (2013). *The dual vocational system is a global export hit – including in the US*. In: *The Atlantic Times*, 1-4. Online: http://www.the-atlantic-times.com/index.php?option=com_content&view=article&id=1711%3Aapprenticeship-made-in-germany&catid=95%3Adezember-2013-business&Itemid=65.

Sulaiman, M. (2011). *Mengarusperdanakan Latihan Kemahiran*. Putrajaya.

Wilson, D. (2001). *REFORM FOR CHANGING OF TVET THE OF WORK*. *Prospects*, XXXI(1).

Yazçayır, N. & Yağcı, E. (2009). *Vocational and technical education in EU nations and Turkey*. *Procedia - Social and Behavioral Sciences*, 1(1), 1038–1042. Online: <http://linkinghub.elsevier.com/retrieve/pii/S1877042809001906> (retrieved 21.5.2013).

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