

## 6 Technical and vocational education and training in Malaysia

### From policy to implementation \*\*\*

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#### Background

Malaysia's aspirations to achieve developed country status have been fuelled by several decades of heady economic growth. This growth has seen the Malaysian economy transformed from a primary commodities producer to a major manufacturing hub, earning the country membership into a group of economies that the World Bank in its report *The East Asian Miracle* (World Bank, 1993) called High Performing Asian Economies. When the last decade of the 20th century began, it did not appear far-fetched to Malaysia's leadership that making the transition from middle- to high-income by transforming to a "knowledge (K)" economy was a feasible endeavour. Vision 2020, announced by then Prime Minister Mahathir Mohamad in 1991, was to give substance to this plan.<sup>1</sup> Technical and vocational education and training (TVET) would have to be an integral part of human capital deepening.

But Malaysia's TVET program is more than a matter of ambition. It is also one of necessity – for several reasons. First, rapid economic growth had elevated the demand for labour that could not be matched by the increase in labour supply from population growth. At the same time, labour supply itself was depleted by the rapid expansion of enrolment in both secondary and post-secondary education. Malaysia had thus little choice but to import labour. Thus was born the low-cost imported labour model. In this model, Malaysian workers would move

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up the skills ladder with unskilled work performed by imported labor. How would these skills be acquired? TVET was an obvious answer.

Second, not long after the launch of Vision 2020, the development model Malaysia employed, manufacturing using low-cost labour, began to fray. Despite redistributive policies based on extensive affirmative action, income inequality has increased; not all segments of the population have benefited, and development has come with increasing environmental cost. The Asian Financial Crisis (AFC) that befell Malaysia in 1997 also put an end to the high growth phase. From year 2000 until 2008, Malaysia's GDP grew at just 5.5 percent, still respectable, but nowhere near the average 9.1 percent from 1990 to 1997 (NEAC, 2010). With other countries in the region experiencing equal or more rapid growth, the country's position as regional leader was also eroding. Private fixed investment failed to recover even as net foreign direct investment (FDI) leveled off with the rise of alternative FDI destinations such as Indonesia and Vietnam. External factors such as the bursting of the tech bubble in the US during the turn of the century did not help (Lee & Thiam, 2009, pp. 920–921). The deceleration in growth has raised concerns among the country's leadership that Malaysia may be in danger of falling into the "middle-income trap". The heart of this challenge is the country's inadequate labour supply in both quantitative and qualitative terms. TVET again takes centre stage if this challenge is to be met.

Third, the growth in numbers notwithstanding, quality issues in the Malaysian education system especially relating to the physical sciences are on display in the data provided by the Trends in Mathematics and Science Study (TIMSS), conducted every four years<sup>2</sup> and in the OECD study Programme for International Student Assessment (PISA) in 2009.<sup>3</sup> Malaysia's TIMSS scores for the three most recent studies show that in both mathematics and science Malaysia falls far behind the leaders, made up of the Newly Industrialized Economies (NIEs).<sup>4</sup> More worrying, the absolute scores have declined over time, with mathematics and science scores lower in 2011 compared to 1999. This is despite improved student results reported for national examinations every year. Malaysia's universities are also nowhere near the top Asian universities in terms of ranking.<sup>5</sup> A sound TVET system could, even if partially, make up for inadequacies in academic education.

These developments have elevated TVET to a central role in Malaysia's human capital development. The overarching objective of this chapter is to assess if Malaysia's TVET system is up to this task. The specific objectives are to (1) examine the system's performance in three areas: policy-making, system oversight and program delivery; (2) review the progress made in each of these areas over the decade 2000–2010; (3) draw lessons from the above analyses; and (4) provide recommendations in light of these lessons. The focus is on the public sector; partly because information on non-state provision of TVET is far from complete, but also because the public sector dominates the TVET landscape both in terms of policy and delivery.<sup>6</sup>

The rest of this chapter is structured as follows. Section 2 provides an overview of Malaysia's TVET system. An evaluation of the three dimensions of performance over the first decade of this century follows in Section 3. Section 4 draws together lessons of experience from the above reviews. Section 5 concludes with policy recommendations based on lessons drawn.

Malaysia's TVET system

Malaysia's education system can be broadly categorised as consisting of three streams (Table 6.1). The second and third streams make up the TVET system.

These streams are not watertight, and pathways exist for students to transfer from pursuing studies in one stream to doing so in another. As Figure 1 shows, transfer from the academic to the vocational stream could occur upon the completion of primary education.<sup>7</sup> Students opting for the vocational stream then complete 3 years of junior vocational education, in parallel with those enrolled for 3 years in lower secondary education in the academic stream. The next opportunity for transfer to vocational education occurs when students are enrolled in upper secondary education. Transferring students then enroll in vocational institutes. A final avenue for transfer exists at the tertiary education level, where students are free to transfer between universities and university colleges and vocational institutes of higher education.

The relative simplicity of Figure 6.1 belies the large number of agencies in charge of an even wider array of institutions delivering training at different skill levels. The details of these are shown in Figure 6.2. No fewer than 13 federal

Table 6.1 Main Streams of Malaysia's Education (and Training) System

Stream	Institutions	Workplace Preparation
Academic education	Universities and other tertiary education institutions, both public and private	Managerial, professional occupations, including those requiring technology
Technical and vocational education	Polytechnics, technical institutes/colleges and community colleges	Supervisory occupations, including technical assistants and supervisors
Vocational skills training	Skills training institutions, both public and private	Skilled and semi-skilled occupations

Source: Pang (2010), Table 2.2.

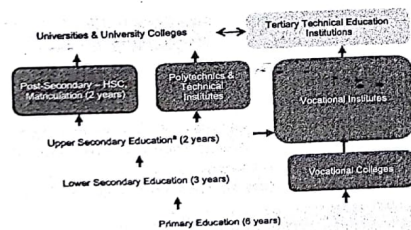


Figure 6.1 Pathways in Malaysia's education system.

Source: Adapted from Abdul Rahman Ayub (2012).

\* Includes secondary technical and vocational education.

Ministry or Agency <sup>a</sup>	No. of Institutions	Total Enrollment	Under the Malaysian Skills Certification (SKM) System					Bachelor of Eng Tech
			Certificates		Diplomas			
			1	2	3	4	5	
MOE	88	25,000	Technical and Vocational schools <sup>b</sup>					
		17,000	Community colleges					
MOHE	99	88,000	Polytechnics					
	3	24,000						UTEM, UNIMAP, UTHO <sup>c</sup>
		10,800	Industrial Training Institutes (ITIs)					
MOHR	27	3,200						Japan-Malaysia Institute of Technology (JMTI), Advanced Technical Training Centre (ADTEC)
	1	538 <sup>d</sup>						Centre for Instructor and Advanced Skills Training (CIASIT)
		2,000						
		10,000						
		2,700						
		19,000						
TRRD	234	20,500						
MYS	17	8,200						National Youth Skills Training Institute (KBN) <sup>e</sup> , National Youth Higher Skills Training Institute (UKTEN) <sup>f</sup>
MOA	7	700						Ministry of Agriculture Institutes
MOD	5	805						Institutes of the Armed Forces Ex-Servicemen Affairs Corporation (Perheba)
MOW	6	37,000						Construction Industry Development Board (CIDB)
States	13	20,000						State Institutes
Private	n.a.	60,000						Accredited Centers

Figure 6.2 Federal, State and Private Institutions Providing TVET by Skill Level, 2012

Source: CIDB (2011), Department of Skills Development (2013a), GiatMARA (2008), Mohd Gazali Abas (2012), Pang (2011).

- a Full names of the ministries or agencies are shown in the list of abbreviations at the end of the report
- b Some programmes lead to the Sijil Pelajaran Malaysia Vokasional (SPMV, Malaysian Certificate of Vocational Education).
- c The acronyms refer, respectively, to Universiti Teknikal Malaysia Melaka (UTEM), Universiti Malaysia Perlis (UNIMAP), and Universiti Tun Hussein Onn (UTHO).
- d Enrolment only in courses leading to Vocational Training Officer Certificate (VTO), SKM level 3 and VTO, Vocational Instructor Advanced Diploma (DLPV).
- e Acronyms stand for the Bahasa Malaysia equivalent of the terms in English; see list of abbreviations for the full explanation.
- f GiatMARA (Gerakan Insaf Anak Tempatan), established in 1986 as a non-profit, grassroots training institution under MARA, provides skills training and lifelong learning to school dropouts, retrained workers and poor students from the *Bumiputera* ethnic community.
- g Includes the British Malaysian Institute (BMI), Malaysia France Institute (MFI), Malaysian Spanish Institute (MSI), Malaysian Institute of Aviation Technology (MIAT).
- h Examples include Institut Akuakultur Marin, Institut Perikanan Malaysia, Institut Veterinar Malaysia, and various institutes.