

Malaysian Indians and Education

Reimagined Development Opportunities

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5 Tertiary Education of Malaysian Indians

Challenges and Prospects

Saratha Sithamparam and Moses Samuel

Introduction

Pertinent to the tertiary education of Malaysian Indians is the instrumental goal of developing knowledge and employment skills for participation in a multicultural society and a globalising workplace. Tertiary education options include all formal post-secondary education from universities to vocational institutions. The sector is diversified and stratified and increasingly responsive to producing an employable and productive workforce (World Bank, 2021). At its simplest, the benefit of pursuing tertiary education is the higher salaries graduates earn. In 2020, the mean income for tertiary graduates in Malaysia was RM4,171 while the mean for workers with secondary schooling was RM2,125. This is echoed in mean incomes according to skill: RM4,619 for skilled workers, RM2,007 for semi-skilled and RM1,727 for unskilled workers (Department of Statistics Malaysia, 2020).

Tertiary education, therefore, is vital if Malaysian Indian youth aspirations as reported in the 2018 Khazanah Research Institute (KRI) *School-to-work transition of young Malaysians* survey are to be realised. Success at work was their main priority (22%); followed by the need for a clear career path (16%) and an appreciation of different life experiences (16%). While policies highlight economic growth and human resource development, at a personal level tertiary education offers possibilities for career prospects, higher incomes and a better quality of life.

There are, however, challenges. In 2014, the Ministry of Higher Education (MOHE) reported that only about 250,000 secondary level students of the 450,000 who completed the *Sijil Pelajaran Malaysia* (SPM) pursued tertiary education (KRI, 2018). While primary and secondary schooling is basic and universal, students may or may not continue studies at tertiary level because of choice, availability of a place or personal circumstances.

A challenge in writing this chapter has been in accessing current statistical data on tertiary students in Malaysia disaggregated by ethnicity to better inform analysis, conclusions and recommendations. The present discussion draws on published materials and documents including the 2017 *Malaysian Indian Blueprint* (MIB), the *Malaysian Education Blueprint (Higher*

Education) (MEBHE) 2015–2025 (Ministry of Education, 2015) and the KRI (2018) school-to-work survey.

This chapter addresses the imperatives for Malaysian Indians to pursue tertiary study before outlining policies relevant to tertiary education. Educational pathways and provisions are detailed with a view to options and routes available to students, including through educational initiatives by the Malaysian Indian community. Given the tensions in discourses on national agenda, community needs and graduate employability, the chapter discusses challenges and prospects examining access and equity, support for learning at the tertiary level and employability. It also suggests directions for community upliftment in this sector.

Tertiary Education Imperatives for Malaysian Indians

The increased participation of Malaysian Indians in tertiary education is critical to break the cycle of poverty afflicting a significant segment of the community where there exists a schism (Belle, 2015) between the top 20 (T20) and middle 40 (M40) and bottom 40 (B40) households. Average incomes reported according to aggregated composites of “race” do not capture actual levels of poverty (Belle, 2015). For example, the 2014 *Household Income Survey* reported the mean monthly income for Malaysian Indian households as RM6,246 compared to RM5,548 for Bumiputera and RM7,666 for Malaysian Chinese (MIB, 2017) placing Malaysian Indians securely between the other two major ethnicities of the national demographic. However, 83% of income is earned by the T20 and M40 strata boosting aggregated figures for the community. B40 households earn the remaining 17% (MIB, 2017).

The poverty of B40 Malaysian Indians is evident in the dire circumstances of longhouses on plantation fringes and urban low-cost flats and squatter settlements. Economic shifts uprooted workers from plantations, which had provided wages, housing, rudimentary education and a semblance of community life (Selvaratnam, 2021). They relocated to towns in search of new livelihoods but the social engineering of the New Economic Policy (NEP) reduced jobs available to Malaysian Indians so that they were at the bottom of the socioeconomic ladder. They had moved from “plantation poverty” to become an “urban underclass” (Marimuthu, 2016, p. 103), destitute and marginalised.

Low incomes of B40 Indians result from a lack of employable skills and an entrepreneurial capacity to provide market-value goods and services. Low educational levels contribute to unemployment and significant employment in low-income jobs (Monash University Malaysia survey, 2010 in MIB, 2017). Citing the 2014 *Household Income Survey*, the MIB (2017) reports 227,000 Malaysian Indian B40 households earning a monthly income of RM2,367; 22,000 households earned less than RM1,000 per month. Unemployment among youth is also high. The 2015 *Employment rates by ethnicity and age group* reported that 25.5% of Malaysian Indians of the 15–19 age group and 14.4% of 20–24-year-olds were unemployed (MIB,

2017). Also, the 2016 KRI study found inter-generational mobility in skills and income the lowest for Malaysian Indians (19%), compared to 25% for Bumiputeras and 39% for Malaysian Chinese (MIB, 2017). There is, therefore, an urgent need for socio-economic upliftment and inter-generational mobility.

Importantly, low educational attainment needs to be addressed. In 2010, for example, 9% of Malaysian Indians in the 20–24 age group completed only lower secondary schooling compared to 6% Malays and 5% Malaysian Chinese (MIB, 2017). Also, the MIB (2017) reports lower academic performance by Malaysian Indians in school examinations compared to national averages: 54% of primary students passed all subjects in the *Ujian Penilaian Sekolah Rendah* compared to the national rate of 66% and at the secondary level 44% passed all subjects for the SPM compared to 55% nationally. This is exacerbated by Malaysian Indians dropping out of school; 2014 statistics report 1,000 children dropping out of primary school and around 4,300 dropouts from secondary school (MIB, 2017). Progression into tertiary education is thus affected.

Degrees, diplomas or certificates from tertiary institutions improve chances of employment and income generation, potentially contributing to poverty alleviation. Higher levels of education are also consonant with demands for competencies for employment given the 4th industrial revolution (4IR) (Rao, 2009). It is equally important that T20 and M40 Malaysian Indians gain fair access to tertiary study. Policies such as affirmative action for Bumiputeras have curtailed admission to public tertiary institutions so that students have had to seek alternative options. In considering a way forward, the policy context needs to be considered before examining pathways and institutional provisions.

Policy Context

Tertiary education in Malaysian public higher education institutions is centralised under the Ministry of Higher Education. Early universities, however, were self-governing beginning with the establishment of the University of Malaya. While affirming institutional autonomy, the 1969 Suffian Report also noted the need for a university to consider “a fair and equitable distribution of the country’s wealth among all sections of the community” (Wan, 2019, p. 5). In the aftermath of the 1969 communal violence, the relationship between state and university took a turn and tertiary education became a vehicle for socio-economic development and social redress. Institutional missions aligned with national policy (Sirat et al., 2020), and policy continues to inform developments in tertiary education (Rao, 2009; Cheong et al., 2016; Sirat et al., 2020 in Table 5.1).

The *first phase*, beginning with the NEP addressed socio-political concerns through poverty eradication and social restructuring through affirmative action. Opportunities for tertiary education were expanded introducing quotas allocating more places for Bumiputeras through a 1971 amendment

Table 5.1 Policy developments related to tertiary education

<i>Phase/Period</i>	<i>Key concerns</i>	<i>Examples of policy instruments</i>
1 1970–1990	Addressing inter-ethnic inequality, income inequity and regional and rural-urban disparities through poverty eradication for all Malaysians and social restructuring including reducing identification of “race” by economic function and increased access to education and employment for Bumiputeras	New Economic Policy 1971–1990
2 1990–2000	Using education to build human resource for a knowledge-based economy, the liberalisation of tertiary education and the recognition of private tertiary education producing diverse tertiary provisions for a broader population of school-leavers	National Development Policy 1991–2000 Private Higher Educational Institution Act 1996
3 Post-2000	Shifting ethnically based affirmative action to needs-based action and meritocracy targeting high-income generation through a highly skilled workforce, and measures for sustainability and inclusiveness. Emphasising education and training of skilled workers for 4IR, entrepreneurship and technical and vocational education and training	New Economic Model 2010 Malaysia Education Blueprint (Higher Education) 2015–2025

of clause 8(A) of Article 153 of the Federal Constitution (Hamid and Jaharuddin, 2018). Scholarships and loans were granted to Bumiputeras, which critics have argued, “on a purely ethnic-based and income blind basis” (Cheong et al., 2016, p. 75).

Affirmative action changed university enrolment patterns by ethnicity. In 1970, undergraduate Malay enrolment was 40.2% (3,084) compared to 48.9% (3,752) Malaysian Chinese, 7.37% (559) Malaysian Indians and 3.7% (282) students of other ethnicities. By 1980, however, the admission of Malay students in tertiary education had increased to 62% (13,610). There was a decrease in non-Malay students down to 31.2% (6,848) Malaysian Chinese, 5.7% (1,252) Malaysian Indians and 1.1% (234) students of other ethnicities (Hamid and Jaharuddin, 2018). Between 1970 and 1980, Malaysian Indian enrolment in local universities fell from 7.37% to 5.7%

raising the question “how to assuage the feelings of the communities at the wrong end of affirmative education” (Cheong et al., 2016, p. 75).

Shortage of places in local institutions led non-Bumiputera students to further their studies in disciplines of their choice abroad, with the added complexity of having to contend with issues such as university and programme recognition. However, parents and employers, particularly the private sector, placed a premium on overseas qualifications (Mukherjee et al., 2017). While Bumiputeras in universities and polytechnics overseas were state-sponsored, most non-Bumiputeras were self-funded. Student demographics of Malaysians in overseas institutions were in stark contrast to Bumiputera-dominant enrolments in local public universities. For example, in 1988, there were 34.3% (14,531) Bumiputera students abroad as compared to 51.3% (21,733) Malaysian Chinese, 13.4% (5,695) Malaysian Indians and 1.1% (424) Malaysians of other ethnicities (Hamid and Jaharuddin, 2018).

The *second phase* from 1990 to 2000 saw greater competitiveness suggesting a pull-back on affirmative action towards meritocracy which proved to be illusory as ethnic-based quotas were still in effect (Rao, 2009; Cheong et al., 2016; Hamid and Jaharuddin, 2018). With the Asian economic crisis, the inability of public tertiary institutions to meet the high demand for places, and the high cost of studying abroad, a domestic solution was needed. The result was private tertiary education (Joseph, 2008, Mukherjee et al., 2017). The Education Act 1996 provided for polytechnics and community colleges, and the Private Higher Educational Institutions Act (PHEIA) 1996 led to further expansion easing non-Bumiputera anxieties about access (Cheong et al., 2016). Malaysians seeking tertiary education abroad could now enrol in programmes locally.

Privatisation of tertiary education was aligned with the National Development Policy focus on human resource development and private sector participation, which continued in the 2010 New Economic Model (NEM). The NEM had candidly observed that the education system was not meeting employer demands: skills were inadequate, graduates lacked creativity and English proficiency was low. However, its initial targets towards merit and greater inclusiveness were not followed through and affirmative action remained entrenched. There was an exodus of non-Bumiputera talent seeking fair opportunity in more equitable environments resulting in a brain drain (Mukherjee et al., 2017). Briefly, the NEM had highlighted the need for a high-quality workforce for a high-value knowledge economy through “high quality education” (National Economic Advisory Council, 2010, p. 37).

In the *third phase*, the MEBHE 2015–2025 seeks to prepare graduates for high-income jobs in a competitive economy through science, technology, engineering and mathematics (STEM). Equal emphasis is placed on technical, vocational education and training (TVET) and academic pathways (Ministry of Education, 2015), encouraging industry to provide faculty, design job-related curricula and fund research students. Also, emphasis on graduate employment is shifting towards job creation and entrepreneurship. In 2011, internationalisation policies had transformed Malaysia into a hub,

leveraging on global interconnectedness to forge international partnerships for research and teaching. Goals draw on global agenda, e.g. the World Bank's emphasis on a knowledge-based economy, the World Economic Forum's *Fourth Industrial Revolution*, the United Nations *2030 Agenda for Sustainable Development* and the International Universities Association's (IUA) highlighting of *Equitable Access, Success and Quality in Higher Education*. The IUA survey reports widening access and strengthening equity through TVET, flexible pathways through the accreditation of prior experiential learning (APEL) and open entry policies (Sirat et al., 2020).

The *Mid-Term Review of the Eleventh Malaysia Plan* (2018), however, noted continuing socioeconomic disparities with high youth unemployment and a rising cost of living making growth less felt. Three of the strategic thrusts for 2018–2020 suggest the potential of tertiary education for addressing community needs, including that of Malaysian Indians: the enhancement of inclusiveness towards an equitable society including uplifting B40 households; the improvement of wellbeing for all; and human capital development through TVET. However, there needs to be an awareness of pathways and provisions for students to avail themselves of potential educational opportunities.

Tertiary Education Pathways

Pathways may be academic or TVET-related leading to degrees, diplomas or certificates. Students may commence tertiary study upon obtaining secondary qualifications such as the *Sijil Pelajaran Malaysia* (SPM) (Sirat et al., 2020). Admission requirements to various levels of study comprise secondary school qualifications for diploma courses; post-secondary or pre-university qualifications for undergraduate study; bachelor's degrees for master's programmes; and master's degrees for doctoral study with programmes stipulating minimum credits to be achieved before the award of qualifications. Education levels, graduating credits and qualifications for academic and TVET pathways are detailed in the Malaysian Qualifications Framework (Table 5.2).

Admission to public universities requires pre-university study. Options include (a) the *Sijil Tinggi Persekolahan Malaysia* (STPM), (b) the Foundation programme, (c) full-time pre-degree preparatory programmes offered by some local universities which may be open to non-Bumiputeras or (d) the more competitive, cost-effective matriculation programme which had sparked debates about equity with the 2019 decision to retain the 90% Bumiputera and 10% non-Bumiputera quota while increasing the number of places. The hope in 2018 had been for a quota readjustment to accommodate marginalised B40 Malaysian Chinese and Malaysian Indian students who had to take extensive loans to attend private colleges, or put their education on hold to start employment if they failed to gain access through subsidised pathways (Rozlan, 2019). Matriculation remains "largely the preserve of Bumiputeras and completion of the programme almost always" results in admission to a public university (Cheong et al., 2016, p. 77). Many Malaysian Chinese and Malaysian Indian students, therefore, have had to opt

Table 5.2 Malaysian Qualifications Framework (MQF)

MQF level	Graduating credit	Sector		Lifelong learning
		Academic	TVET	
8	No credit rating 80	PhD by research		Accreditation of Prior Experiential Learning (APEL)
		Doctoral degree by coursework and mixed mode		
7	No credit rating 40	Master's degree by research		
		Master's degree by coursework and mixed mode		
		Post-graduate diploma		
		Post-graduate certificate		
6	120	Bachelor's degree	Bachelor's degree	
	64*	Graduate diploma	Graduate diploma	
	34*	Graduate certificate	Graduate certificate	
5	40	Advanced diploma	Advanced diploma	
4	90	Diploma	Diploma	
3	60	Certificate	Certificate	
2	30	Certificate	Certificate	
1	15	Certificate	Certificate	

* Inclusive of 4 credits for UI courses from general studies

Source: Malaysian Qualifications Agency (MQA) (2021)

for affordable pre-university study through the 2-year STPM route, perceived to be academically more challenging (Mukherjee et al., 2017). Other more costly channels include the GCE A-Levels, the International Baccalaureate Diploma Programme and the Canadian matriculation programme or equivalents which are options for admission to private institutions or universities abroad.

Undergraduate degrees may lead to professional qualifications or post-graduate study. After two to two and a half years of study, students may earn diplomas providing entry into the workforce. Diplomas may be transferred to degree programmes earning students a 1-year exemption. Certificate-level courses are options for students completing the SPM with insufficient credits for pre-university or diploma programmes. With an entry requirement of one SPM credit, students can pursue a skills-based course to be work-ready, with the possibility of further studies through the diploma route.

The skills-based route includes TVET programmes by various ministries, government agencies and private institutions. While multiple routes may produce “unintended competition and duplication” (KRI, 2018, p. 53), they offer students choices including whether to pursue local or international qualifications.

While tertiary education traditionally occurs at the end of schooling, non-traditional, previously employed older students may now return to study including to upskill or re-skill for new types of work. With lifelong learning, tertiary education is available through APEL as an alternative admission pathway to undergraduate programmes by Malaysian universities (Sirat et al., 2020). It provides students, including B40 Malaysian Indians, whose circumstances may have compelled them to begin employment after schooling, a second chance to earn qualifications for better jobs and higher incomes facilitating social mobility.

Tertiary Education Provisions

Academic and TVET programmes are offered by universities and university colleges, as well as polytechnics, community colleges and private colleges. Complementing state-funded public provisions are a plurality of players in private tertiary education including government corporations, public-listed companies, entrepreneurs, smaller private colleges, non-profit philanthropic organisations and political parties (Marimuthu, 2008). The “social allocation of resources” by ethnic groups (Joseph, 2008, pp. 184–185), and the consociational orientation of traditional Malaysian politics (Hamid and Jaharuddin, 2018), have led ethnic-based non-Bumiputera political parties such as the Malaysian Chinese Association (MCA) and Malaysian Indian Congress (MIC) to play a pro-active role in developing tertiary education provisions for their ethnic constituents. This is in addition to mediating and seeking remedies for student grievances including university placements, matriculation places and other awards (Rao, 2009).

The MIB (2017) had articulated targets for a 30% increase in enrolment and graduation of B40 Malaysian Indian students in tertiary institutions, including TVET, and a 7% Malaysian Indian student enrolment in government colleges, universities, polytechnics and other tertiary institutions. Monitoring of targets and delivery was initially under the purview of the Unit for the Socioeconomic Development of the Indian Community (SEDIC), Prime Minister’s Department which has since been replaced by the Malaysian Indian Transformational Unit (MITRA) in the National Unity Ministry. Though sidelined since 2018, MIB targets for quality education and upskilling for increased employment opportunities have recently been re-affirmed by the *Twelfth Malaysia Plan 2021–2025* (2021). In detailing public and private academic and TVET provisions, this section highlights recent developments and the role of the Malaysian Indian community.

Provisions for Academic Study

There are currently 20 public universities, 47 private universities, 10 foreign university branch campuses and 34 university colleges (StudyMalaysia.com, 2020). Public universities are categorised as research universities, focus universities and comprehensive universities. The five research universities are competitive emphasising excellence and innovation with an even ratio of post-graduates to undergraduates. Eleven focus universities have a concentration of specialised fields each, while four comprehensive universities offer courses in different disciplines with a larger proportion (70%) of undergraduate programmes.

Increasingly important for non-Bumiputeras is private education. Students, including from M40 and T20 Malaysian Indian families, who might previously have had to pursue studies abroad for programmes of their choice paying full fees and incurring high living costs can now pursue similar tertiary study locally at a lower cost. Additionally, private institutions teaching programmes in English allow English-medium private school students continuity in their progression to tertiary study (Cheong et al., 2016). Degrees may be awarded in transnational collaborations between foreign universities and local institutions. Cooperative arrangements include twinning, credit transfer, external degrees, distance learning, joint programmes and e-learning. Twinning could comprise a year of study locally and 2 years in the foreign partner institution (1 + 2); 2 years in the local private institution with the final year abroad (2 + 1); and from the mid-1990s, the 3 + 0 mode with the entire programme in the local institution (Marimuthu, 2008). Franchised programmes are also offered.

In addition, the PHEIA 1996 and internationalisation have paved the way for foreign university branch campuses providing similar academic programmes and facilities as their home institutions (see Table 5.3).

Foreign university branch campuses of reputable universities offer diverse programmes including professional degrees such as medicine and engineering. They are significant in expanding access to prestigious tertiary education locally at less prohibitive costs.

Community-Oriented Academic Provisions

With increasing numbers of students completing secondary schooling and the limited number of places available in local public universities, there was a rising demand for affordable professional and science-based tertiary education by Malaysian Indian students. In 1984, the Maju Institute of Educational Development (MIED) was set up as the educational arm of MIC to expand educational opportunities and provide financial support for deserving Malaysian Indian students. In response to community demand for tertiary education, MIED set up a state-of-the-art, non-profit, private university. The Asian Institute of Medicine, Science and Technology (AIMST University) was established in 2001 under the PHEIA 1996 beginning with

Table 5.3 Foreign university branch campuses in Malaysia

No	Foreign university branch campus	Year established in Malaysia	Location of home institution	Location in Malaysia
1	Monash University Malaysia	1998	Australia	Selangor
2	Curtin University Sarawak Malaysia	1999	Australia	Sarawak
3	The University of Nottingham Malaysia Campus	2000	United Kingdom	Kuala Lumpur/ Selangor
4	Swinburne University of Technology, Sarawak Campus	2004	Australia	Sarawak
5	Newcastle University of Medicine Malaysia	2007	United Kingdom	Johor
6	University of Southampton Malaysia Campus	2011	United Kingdom	Johor
7	Heriot-Watt University Malaysia	2012	United Kingdom	Putrajaya
8	University of Reading Malaysia	2013	United Kingdom	Johor
9	Xiamen University Malaysia Campus	2015	China	Selangor
10	Royal College of Surgeons in Ireland and University College Dublin Malaysia Campus	2018	Ireland	Penang

Source: StudyMalaysia.com (2020)

a matriculation programme that evolved into foundation programmes in science and business (AIMST, 2015).

The AIMST medical degree programme, together with subsequent degrees, were developed with curriculum frameworks from the University of Bristol. In 2003, admission was extended to international students and the university expanded the number of programmes offered in biomedical, paramedical and non-medical domains (Bhore et al., 2015). Disciplinary specialisations include medicine, pharmacy, dentistry, dental technology, physiotherapy, biotechnology, bioinformatics, nursing, engineering, finance and management, business and marketing, management information systems, accounting and auditing. In 2004, its first post-graduate programme, the masters in science in biotechnology by research was approved and programmes now range from foundation, diploma and undergraduate to post-graduate study.

The language of instruction is English and AIMST provides language support to students before and during their university studies. In addition, most of the degree programmes have components comprising computer training, writing and research so that students develop communication and study

skills and the technological competence necessary for study and work in their areas of specialisation. In March 2021, AIMST University's online pre-foundation programme was launched. Designed for SPM and O-level students, it bridges the gap between school and university life in preparation for admission to the mainstream foundation programme (AIMST, 2021). Affiliated to the Asia-Pacific University Community Engagement Network (APUCEN), the university has links with local and international tertiary institutions and offers study abroad and exchange programmes. The university is accredited for scholarships from the Public Services Department (PSD) and all its courses are MQA accredited.

While fees at public institutions are subsidised, students at private universities pay full fees. Established as a revolving fund, MIED provides loans to Malaysian Indian students from their second year of study. According to Periasamy (2019), MIED had thus far granted RM145 million in loans to 11,271 students mostly from B40 households supporting 342 Malaysian Indian students per year. In relation to AIMST, MIED has provided financial support to "481 needy and well-deserving students" (Bhore, 2016, p. 30) enrolled in various programmes as of April 30, 2015 (see Table 5.4).

In addition, scholarships and financial aid are provided by AIMST including full scholarships for foundation programmes, as well as the "top achievers award". The university has graduated more than 5000 Malaysian Indian professionals including doctors, dentists and pharmacists (Periasamy, 2019). While AIMST was established primarily to increase access to professional and science-based tertiary study for Malaysian Indians, admission is inclusive of Malaysians of all ethnicities as well as international students.

A counterpoint is the establishment of the state-funded Universiti Institut Teknologi MARA (UiTM) to promote the development of the Bumiputera community. In 2021, the Ministry of Finance (MOFM) announced a 11.4 billion allocation for Bumiputera development programmes under Budget 2022. RM6.6 billion will be channelled for educational purposes to Bumiputera-based institutions such as those under MARA and UiTM (Ministry of Finance Malaysia, 2021).

Table 5.4 Loans disbursed to AIMST students by MIED

<i>No</i>	<i>Academic programme</i>	<i>Number of student recipients</i>	<i>Amount disbursed (RM)</i>
1	Medicine	329	10,557,801.55
2	Dentistry	31	869,790.00
3	Pharmacy	14	184,230.00
4	Business	5	44,675.00
5	Engineering	5	84,000.00
6	Information Technology	4	31,070.00
7	Others	93	740,442.00
	Total	481	12,512,008.55

Source: Bhore (2016, p. 30).

UiTM was established as the MARA Institute of Technology in 1967 addressing the need for Bumiputeras in science and technology, as well as management and humanities-based fields. A full public university under the Ministry of Higher Education since 1999, it comprises a main campus and 35 branch campuses in all states. With an enrolment of 172,659 students, it collectively runs 504 programmes so that in terms of size, reach and population, it is the largest university system in the country (Universiti Teknologi MARA, 2021).

Provisions for Skills Development and Training

TVET is increasingly recognised as developing human resources for economic transformation. Ministry of Education targets include 70% employment of TVET graduates as skilled workers, 20% pursuing higher education and 10% becoming young entrepreneurs, a goal realised by 98.29% of vocational college graduates according to a recent TVET graduate tracer study (Rajaendram, 2021). Budget 2022 allocates RM6.6 billion for strengthening TVET under relevant ministries and agencies and RM200 million for collaborations with industry (MOFM, 2021). For greater participation, there needs to be awareness by Malaysian Indians of programmes and pathways available through multitiered TVET streams and institutional provisions, which may be accessed by students subject to stipulated criteria. Human resource outcomes by way of workforce preparation are indicated in Table 5.5.

While some public universities offer TVET, polytechnics are the main providers. The 36 polytechnics with campuses nationwide comprise 3 premier, 28 conventional and 5 metro polytechnics. Programmes include engineering, aircraft maintenance, architecture, food technology, information communication technology, accountancy, visual graphic design and hospitality leading to diplomas, advanced diplomas and degrees. Foregrounded are learning experiences in employment environments on industrial training programmes, industry-responsive curricula and work experiences on

Table 5.5 Skills development and training provisions in Malaysia

<i>Stream</i>	<i>Institution</i>	<i>Workforce preparation</i>
Tertiary education	Universities and other institutions of higher learning both public and private and premier polytechnics	Professional and managerial personnel such as engineers, architects and surveyors
Technical and vocational education	Polytechnics, technical colleges and community colleges	Supervisory personnel such as technical assistants and supervisors
Vocational skills training	Skills training institutions, public and private and vocational colleges	Skilled and semi-skilled workers

Source: Phang (2010) in Kandiah (2016, p. 429).

Table 5.6 Ministries providing skills development and training

<i>Ministries</i>	<i>Skills development and training provisions</i>
Ministry of Higher Education & Ministry of Education	<ul style="list-style-type: none"> • Public and private universities • Polytechnics (premier, metro and conventional) • Community colleges • Vocational colleges
Ministry of Human Resources	<ul style="list-style-type: none"> • Japan Malaysia Technical Institute (JMTI) • Advanced Technology Training Centre (ADTEC) • Industrial Training Institutes (ITIs) • Centre for Instructors and Advanced Skills Training (CIAST)
Ministry of Youth and Sports	<ul style="list-style-type: none"> • Higher National Youth Skills Institute (IKTBN) • National Youth Skills Institute (IKBN)
Ministry of Agriculture and Food Industries	<ul style="list-style-type: none"> • Malaysian Agriculture Institutes
Ministry of Works	<ul style="list-style-type: none"> • Malaysian Construction Academy (ABM)
Ministry of Rural Development	<ul style="list-style-type: none"> • Giat MARA* • MARA Skills Institute* • MARA Higher Skills Institutes*

* Bumiputera only provisions

Source: Kandiah (2016, p. 43).

employer projects (Malaysia Polytechnics, 2019). The recently established Industry Advisory Council including 21 industry leaders provides direction for improving the TVET ecosystem (Adam, 2021).

Seven ministries (see Table 5.6) provide a range of TVET programmes through various institutions under their purview (Kandiah, 2016). Under the TVET Malaysia Master Plan, the government aims to harmonise these provisions for purposes of efficiency and improved performance (Sani, 2018). All upskilling and multiskilling programmes will be placed under the Human Resource Ministry to be managed by the Human Resource Development Corporation (Bernama, October, 2021).

In addition to the above provisions, post-secondary TVET education is offered by community colleges and vocational colleges.

Community-Oriented Skills-Based Provisions

While skills-based education and training have developed into a distinct field straddling educational and employment standards, Malaysian Indians do not perceive it favourably (Kandiah, 2016). There is therefore a need to encourage the community to move beyond seeing “university education as the sole pathway to success, to one where academic and TVET pathways are equally valued and cultivated” (Ministry of Education, 2015 in KRI, 2018, p. 53).

Awareness of skills training among Malaysian Indians was heightened with the establishment of the Arumugam Pillai Industrial Training Institute

(APITI) in 2004. With the dissolution of the South Indian Labour Fund (SILF) in 1999, land donated by Arumugam Pillai was transferred to the Ministry of Human Resources for the establishment of APITI. In response to the initial objections to the transfer by the Malaysian Indian community, the government pledged that children of former plantation workers would benefit from the institute built under the 8th Malaysia Plan (Jayasooria, 2016).

While the first batch of 61 students in January 2005 did not have any Malaysian Indian students (Jayasooria, 2016), an intensive promotional campaign by the Social Strategic Foundation (YSS) resulted in an enrolment of 30 students for the second intake, and APITI has since graduated more than 700 Malaysian Indians with a minimum of a level 3 skills certificate. Some students have continued to further their education at various technical institutions (Kandiah, 2016). Courses conducted by the institute include computer networking, interactive multimedia, graphic and press technology and the proportion of Malaysian Indians for yearly intakes has been maintained at around 30%.

The establishment of TAFE College also provides access for Malaysian Indian students in the TVET sector (Kolej TAFE Seremban, 2021). It aims to produce industry-ready graduates and is an approved centre for skills training under the *Jabatan Pembangunan Kemahiran*. TAFE fees are affordable and admission is open to Malaysians of all ethnicities.

The TAFE curriculum was developed to meet the needs of industry with niche areas in engineering, business and IT. All programmes are accredited by the MQA, the Ministry of Education and the Public Services Department. Since its inception, TAFE College has trained 44,000 Malaysian Indian students in TVET preparing them for employment through its various programmes (Periasamy, 2019).

Community-oriented provisions such as AIMST University and TAFE College and financial aid sources such as MIED have thus contributed to ameliorating the social and educational inequalities that might otherwise have more starkly confronted Malaysian Indians pursuing academic or skills-based tertiary education.

Future Directions: Challenges and Prospects

Against the backdrop of the impact of the tertiary education sector on Malaysian Indians, what are the future directions for the community? From the vantage point of the 2020s, given the uncertainties of the fluidity of the socio-political landscape, one can merely point to possible future directions and concerns. Three main thematic concerns are discernable: educational access and equity; support for learning at the tertiary level; and issues pertaining to employability. Invariably, these issues may also cut across ethnic lines affecting all tertiary students, though the specific details of experiences may differ depending on circumstances. As Jayasooria (2021) put it in a commentary on the 75th MIC general assembly:

The struggle among some policy advocates is to move away from [an] ethnicised approach to socio-economic development to a needs-based approach which addresses the concerns of all the poor and disadvantaged of all ethnic groups. While this needs-based approach is essential for multi-ethnic societies, there is a place to highlight specific community concerns where the issues have a historical context of disadvantage, marginalisation and discrimination.

Access and Equity

Access and equity issues in the post-NEP era have invariably been viewed against the raft of preferential treatment measures in favour of Bumiputeras (Lee, 2017). Quotas and Bumiputera provisions for university entry have limited the number of places for non-Bumiputeras. This use of “ethnic markers” in determining educational provisions have benefitted some and disadvantaged others producing a sense of “marginalisation by state policies” (Cheong et al., 2016, p. 76). While more equitable affirmative measures based on need and merit (Lee, 2017) have been alluded to in the 2010 NEM, the notion of need should take into account socioeconomic status giving preference to students from B40 households across ethnicities including Malaysian Indians.

Among the consequences of higher education policy in NEP years, the 55–45% Bumiputera–non-Bumiputera ratio for admission to local, public universities, placed a cap on places available, resulting in students within an ethnic group competing amongst themselves (Joseph, 2008). Presently, with the ethnic-based matriculation formula of 90–10%, the disadvantage for non-Bumiputera students for entry into public tertiary institutions persists. Given that there are higher levels of demand for the limited number of places for study in public tertiary education, it is inevitable that there is intra-ethnic competition for access with the possibility of potentially capable students being denied access. Also, disadvantaged students such as from B40 non-Bumiputera households would have to have to compete on equal terms with students from socially more advantaged families, raising the prospect of intra-ethnic inequalities.

Further, if students are granted admission, it may not be for a discipline of their choice. An option for addressing these restrictions would involve enrolling in preferred programmes in private tertiary institutions like AIMST, in the much sought-after science and technology-based programmes, through foundation programmes providing entry to the university. According to the Ministry of Higher Education, 50,000 Malaysian Indian students continued on to tertiary studies in private institutions of higher learning in 2014 (MIB, 2017). The cost of private education is high so that fees and other expenses represent another challenge to be surmounted. Table 5.7 offers a fee comparison for selected programmes between public and various types of private institutions. The downside of private tertiary education is that low-income families may not be able to afford the fees if financial aid is not forthcoming.

Table 5.7 Cost comparison of undergraduate programmes for Malaysians (in RM)

<i>Programme</i>	<i>Public university</i>	<i>Non-profit private university</i>	<i>For-profit private university</i>	<i>International branch campus</i>
Management/ business administration (3-year programme)	4,000	38,000	65,000– 81,000	100,000
Communications (3-year programme)	4,000	38,000	60,000– 72,000	102,000
Electrical/electronic engineering (4-year programme)	6,300	45,000	80,000	170,000
Computer science (3-year programme)	4,700	38,000	60,000– 67,000	108,000
Biotechnology (3-year programme)	4,700	42,000	71,000– 88,000	125,000

Source: Wan and Abdul Razak (2015, pp. 339–379).

Affordability issues such as tuition fees and living costs are factors affecting access to tertiary study. Hence, the importance of financial aid through scholarships and loans for low-income households. A statutory body, the National Higher Education Fund Corporation (PTPTN) provides loans for local tertiary education with 55% of borrowers from B40 households receiving 60% of disbursements; 38% of borrowers are from the M40 receiving 35% of the amount disbursed; and 7% of borrowers are from T20 receiving 5% for 2014–2018. While income is a key consideration, ethnicity figures. In line with policies to catalyse their socio-economic mobility, Malays are “the biggest recipients” comprising 66% of the borrowers as compared to 20% Malaysian Chinese, 8% others and 6% Malaysian Indian recipients for 2014–2018 (Wan, 2020, pp. 8–10). This raises concerns for the need for more equitable treatment.

Alternative funding sources based on the KRI 2017 survey are as follows. The tertiary education of 38% of the sample of Malaysian Indian students was funded by parents, 37% had loans, 11% received scholarships while the remaining students either turned to relatives or were self-financed. Seventeen percent of the overall sample had part-time jobs to cover expenses, working as taxi or *Grab* drivers and as food and package deliverers, while others ran online businesses (KRI, 2018). While the PTPTN and MIED offer loans, loan repayment and student debt may potentially present challenges.

Ironically, the MIB (2017) reports that it is a challenge to fill up the seats allocated for Malaysian Indian students in public tertiary institutions. In

2014, Malaysian Indians comprised only 4.5% of the total number of applicants, possibly the outcome of low academic performance at the end of schooling. Two reasons are suggested: (a) students whose academic performance range from low to average may opt to gain employment over pursuing tertiary education and (b) students facing financial constraints (as possibly may be the case with B40 families) may choose not to apply. Table 5.8 reports the number of applicants, the number of qualified applicants and the number of successful applications for the three main ethnic groups in the country for 2014/2015.

Only 2,666 or 79% out of the total of 3,363 Malaysian Indian applicants fulfilled the requirements. This suggests that there need to be provisions to improve student performance through the schooling years and programmes must be instituted to prepare students for tertiary study at the upper secondary and pre-university level. Information needs to be disseminated to community members and prospective students about courses of study, their requirements and application procedures.

It is useful to note that in contrast to the Malaysian Indian experience, Bumiputera affirmative action begins with residential science schools and MARA junior science colleges, which are well-resourced with excellent facilities, have smaller teacher–student ratios and a curriculum ensuring that there is a supply of suitable Bumiputera candidates for science and technology-based courses (Joseph, 2008). This strategy provides food for thought in terms of developing similar opportunities for disadvantaged Malaysian Indian students.

Future directions impacting access to higher education and resulting issues of inequality would need to take into account the following:

- ramifications of alternative post-NEP, post-NEM educational policy options;
- resource allocation and funding available for tertiary education and its impact on different cohorts of the population; and
- emerging inter-ethnic and intra-ethnic disparities and opportunities.

Table 5.8 Enrolment statistics for 2014/2015 public and private universities by ethnicity

<i>Academic enrolment 2014/2015</i>	<i>Number of applicants</i>	<i>% of total</i>	<i>Number of qualified applicants</i>	<i>Number of successful applicants</i>
Bumiputera	54,702	73.9%	50,022	26,039
Malaysian Chinese	10,018	13.5%	9,357	6,620
Malaysian Indian	3,363	4.5%	2,666	1,533
Others	5,988	8.1%	5,343	3,275
TOTAL	74,071	100%	67,388	37,467

Source: MIB (2017, p. 82).

Support for Learning at Tertiary Level

The MIB (2017) reports that among the social interventions that had been undertaken by SEDIC was the dissemination of information on tertiary education options and procedures and assistance to Malaysian Indian youth in applying for tertiary-level institutions. Such initiatives could be extended to helping students and their families understand the demands of tertiary education so that there is community support through the course of their studies. Also, tertiary institutions increasingly provide support by way of counselling and peer-based activities such as through the creation of learning communities. In addition to socialising students into academic culture and life on campus, they help students navigate institutional processes and the use of the resources available. Bridging programmes, such as the recently introduced “pre-foundation” programme in AIMST, also help students gain the skills and prerequisites necessary for a programme of study.

Increasingly, proficiency in English is important for tertiary study and this may represent a challenge for Malaysian Indian students from national schools where the language of instruction is Malay. English is the language of instruction in private tertiary institutions and the presence of transnational institutions has strengthened its use. For students whose primary education has been in Tamil schools and whose secondary study has been in national schools, entry into private tertiary education will represent a second language transitioning experience as they move from the use of Malay as the language of instruction to teaching and learning conducted in English. Further, linkages with foreign institutions and internationalisation activities including study abroad programmes, partnerships in research, internationalisation of the curriculum and innovative pedagogies such as global classrooms have reinforced the need for effective communication skills in English. Language centres in tertiary institutions need to provide language support to hone students’ proficiency in English, which in the long run will contribute to producing more employable and internationally competitive graduates.

The COVID-19 global pandemic has brought to the fore another challenge: the use of technology in tertiary programmes. While the advent of new technologies had already begun to extend learning spaces virtually and introduce flexibility in the delivery of programmes, shutdowns and the disruptions caused by the pandemic led to online teaching and learning being instituted as the “new normal” in academic delivery and operations.

While online learning, blended learning, technology-enabled learning and distance learning models have been incorporated in tertiary pedagogy, the pandemic experience has highlighted the digital divide that exists for students and academics. Some students from B40 homes did not have the appropriate technology or a subscription for broadband Internet. Infrastructural shortcomings such as the lack of fibre optic networks slowed internet speed undermining broadband connectivity (Azman, 2021). This divide has to be addressed through support and the provision of hardware

and infrastructure, as well as the development of technological competencies for students, especially from less well-resourced homes, as may be the case with B40 Malaysian Indians.

Looking to the future, therefore, the optimisation of learning experiences at the tertiary level would have to take into account:

- counselling and awareness-raising of various learning pathways so that there is a fit between prior expectations, self-actualisation in tertiary education and future needs;
- support for learning in terms of resources – linguistic, intellectual, technological and material – to enhance learning experiences and learning environments; and
- enhancement of soft skills and competencies to improve the efficacy of ongoing learning and success rates.

Employability

The challenge for tertiary education is to produce employment-ready graduates in relation to the specifics of the new skills-sets in the knowledge economy. Besides linkages with industry, tertiary education has to take cognisance of the inadequate level of knowledge and skills of graduates, low levels of proficiency in English and the lack of problem-solving and creative skills. With a focus on innovation and entrepreneurship (in addition to taking into account equipping students with the necessary skills and competencies to find a job in the labour market) the pedagogies used in tertiary education should enable students to engage with knowledge in critical, creative ways to encourage real-world application and responsiveness to change and innovation.

The recent *National Job Creation Strategic Plan* highlighted 76% of new jobs fell into the skilled and semi-skilled categories and there has been a call for tertiary education to work with industry to offer courses responsive to the current needs of the economy (Anis, 2021). Malaysian Indian students need to be encouraged to enrol in TVET and STEM-based programmes with an emphasis on industry-relevant knowledge and industry-relevant skills so that they are marketable. Besides preparing graduates for waged or salaried employment, there is also the option for graduates to be self-employed or to be freelance workers. Education and training will need to prepare graduates for labour market changes and the rise of gig and platform economies including internet and digital economy job opportunities (KRI, 2018). The challenge in this sector as indicated in the KRI (2018), however, is that there is little job security and limited labour and social protection. Social security benefits linked to workers and a review of labour legislation relevant to workers in informal, non-standard employment needs to be put in place.

To ensure that graduates from tertiary-level academic and skills-based vocational streams are future-ready in terms of employability, the following will have to be taken into account:

- integration of real-world knowledge and experience with classroom-based experiences;
- incorporation of internships and industry-related modules; and
- continuous curriculum evaluation so that pedagogy, curriculum and assessment take into account recent developments in workplaces.

Conclusion

While global aspirational statements such as the 2030 Agenda for Sustainable Development launched in 2015 pledge that “no one will be left behind” and “to endeavour to reach the furthest behind first” (UN General Assembly, 2015), national will and strategic action are needed for its realisation. Malaysian demographics and recent analysis (see for example Jayasooria and Nathan, 2016) suggest that Malaysian Indian B40 families are among “the furthest behind”. The sense of despair and hopelessness that has come to characterise the B40 Malaysian Indian experience demands vigorous capacity-building through access to tertiary education if they are not to be “left behind”.

With the expansion of diverse public and private tertiary education provisions, students can earn qualifications at appropriate levels of study that will enable their active participation in the economy. The imperative, therefore, is for Malaysian Indian students to realise their potential so that there is inclusive and sustainable socio-economic development through fair access to education and employment. Tertiary education is mobility-enhancing and equity and social justice could be better served by encouraging and motivating Malaysian Indian youth to continue on to the tertiary level.

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