TNE Graduate Employment Study: An Analysis of Graduate Employment Trends in Malaysia - A Three-Phase Study

PHASE III - EMPLOYABILITY OF GRADUATES IN MALAYSIA : THE PERCEPTIONS OF SENIOR MANAGEMENT AND ACADEMIC STAFF IN SELECTED HIGHER EDUCATION INSTITUTIONS

Rozilini M Fernandez-Chung

Leong Yin Ching

May 2018

Executive Summary

While education broadly framed is more than about human capital, the latter has loomed large in the theories explaining economic growth, in particular, and the development discourse, in general. The depth of human capital is particularly crucial to middle-income countries seeking to be elevated to high-income status, with the 'middle-income trap' awaiting those failing to upgrade their human resources.

Malaysia, the focus of this study, has particular reference not only because it is one of the middle-income countries aspiring to graduate to high-income through its Vision 2020 blueprint but also because its heavy expenditure on education and the objective of becoming an international education hub. These features have translated into enrolment gains but a deterioration in the quality of education when benchmarked against international peers. A casualty of compromised education is the quality of the workforce. Amidst the frequent refrain of unemployable graduates, this study seeks to provide an empirical basis for such claims by seeking the perceptions of senior management and academic staff of selected higher education institutions and policy makers.

The methodology for Phase III is a mixed quantitative and qualitative approach, with a structured questionnaire administered online to senior management and academic staff of higher education institutions, complemented by focus-group discussions/interviews involving twenty senior management, academic staff and policy makers. The respondents were from both public and private higher education institutions, and international branch campuses and the Ministry of Higher Education Malaysia.

As indicated earlier on, this is the third phase of a three-phase study on graduate employability. Phase I looked at employers' perception on what makes graduates employable. Employers spoke about the importance of confidence, communication and the mastery of the English language. Phase II puts to test some of the findings and data that were obtained in Phase I, particularly in relation to the choice of educational institutions, attributes needed for employability and the extent to which the

institutions of higher learning is preparing students to transit from the world of education to that of work. This phase (Phase III) focuses on the response of senior management and academic staff to the issues and concerns raised. The findings are also intended to triangulate those of Phases I and II on issues such as the choice of institutions, graduate attributes for employment, and role of higher education institutions in preparing students adequately for the transition from the world of education to that of work.

Corresponding to the findings from Phases I and II, senior management and academic staff agreed that institutional reputation and branding as well as global recognition are pull factors in the choice of institutions to study in. The perception seems to suggest that a good and reputable institution of higher learning will have the know-how, facilities and services to maximise institutional and personal goals. In turn, this fulfilment will produce graduates to meet the needs and interests of employers.

Like the majority of employers, and parents and students in Phases I and II respectively, senior management and academic staff placed a premium on Transnational Education (TNE) programmes for their international recognition, being well regarded and awarding degrees valued by employers. Similarly, both groups of respondents in this Phase expressed the view that qualifications obtained from international branch campuses in Malaysia and local private universities with TNE elements in their programmes would enhance employment opportunities of their graduates. With regard to the importance of knowledge and skills specific to an organisation, senior management and academic staff placed a high value on knowledge, soft skills like the English language, and hard skills such as information technology besides specific competencies. These findings, too, reflect largely those of the employers, and students and parents in the earlier two phases of study.

Phase III also includes interviews with three senior policy makers from the Ministry of Higher Education, Malaysia. The purpose is to provide a closure to the loop in a study concerning graduate employability from the standpoint of policy makers as one of the primary stakeholders. This is particularly important given that policies and their implementation drive graduate employment and employability, more so in a climate where graduate unemployment is on the rise. The views and perceptions of

the policy makers provide some closure to a highly important question, that is, what is being done to reverse the rising trend of graduate unemployment. There seems to be considerable strides taken by the Ministry to enhance graduate employment and employability, and these include the implementation of a nationwide Tracer Study portal for annual collation of graduate employment six months post completion of studies, CEO faculty, 2u2i (two years each in the university and in industry for undergraduate studies) and iGPA (Integrated Grade Point Average). While the intent of the government, in general, and the Ministry, in particular, is strong, the process of implementation is, however, relatively weak and there is considerable room for improvement. Though recognizing the need to prepare students for employment, the policy makers, inclusive of a majority of senior management and academic staff, are, at the same time, in full cognizance of the primary role of higher education institutions, this being the 'creator, developer and custodian of knowledge' and its application for the well-being of communities and societies on the local, national and international fronts.

With the conclusion of the three phases of the study on graduate employability, data is available on the six main stakeholders, namely, the employers, students and parents, senior management and academic staff of higher education institutions, and policy makers, and their perceptions regarding graduate employability in Malaysia. Overall, the study objective is to bridge the gap between the output of graduates by the higher education institutions and the needs and Interests of employers in the formation of human capital for economic transformation of Malaysia from a middle-income to a high-income nation by 2020. Of note is the fact that employment criteria will change over time with the varied economic and fast-changing technological environments. As institutions of higher learning change relatively slower than those of the economic and technological environments, the bridging of the gap between graduate output and labour market demands will remain a challenging act to perform.

ACKNOWLEDGEMENTS

I would like to thank the British Council, United Kingdom, for providing the financial support for this study entitled 'Employability of Graduates in Malaysia : The Perceptions of Senior Management and Academic Staff of Selected Higher Education Institutions'. This is the final phase of a three-phase study on employability of graduates, in general, and TNE graduates, in particular.

Phase I of the study, completed in 2014, provided an overview of employers' perception of graduates and recommendations at the curriculum and institutional levels to enhance graduate employability. Phase II, completed in 2015/2016, focused on students and parents, and what was deemed to be important by these stakeholders in enhancing graduate employability. Phase III focused on the perception and views of senior management and academic staff of selected higher education institutions. In the course of data collection, Phase III respondents were provided with the relevant findings from Phases I and II. The findings of this final phase close somewhat the loop on graduate employment and employability, in general, and TNE graduates, in particular. All three phases constitute the series on 'TNE Graduate Employment Study : An Analysis of Graduate Employment Trends in Malaysia'.

With regard to data collection in Phase III, I am grateful for the support of all respondents to our online questionnaire survey and those who participated in the focus-group discussions/interviews. Clearly, the responses, interactions and viewpoints provided were invaluable for the process of data collection and analysis.

This study could not have been completed without the help and support of Dr. Leong Yin Ching who, although in retirement, spent considerable time on the report and undertook the lion share of the writing. I am also very grateful to two research support staff in the persons of Ms Chia Yip Ping and Ms Cristina Dynishas who patiently went through both long and stretched-out moments and, often, intense and fast-paced days of work.

Also, I would to thank my colleagues at the Centre for Academic Partnerships and Engagement, and Prof. Ong Fon Sim, Vice-Provost (Teaching and Learning),

University of Nottingham Malaysia. Their support and understanding went a long way during the course of data collection and focus-group Interviews, and also when I was holed-up in trying to complete the report.

Associate Prof. Dr. Rozilini M. Fernandez-Chung
Director, Centre for Academic Partnerships and Engagement, University of Nottingham Malaysia

CONTENTS

FIGURES

TABLES

1.0 INTRODUCTION

1.1 The Fourth Industrial Revolution (IR 4.0)

The fourth industrial revolution (IR 4.0) has unleashed, in its wake, powerful socio-economic and technological forces which drive fast-pace changes that will change, fundamentally, the way we live, work and communicate with one another. While the first industrial revolution of the late 18th and early 19th centuries witnessed the use of water and steam power to revolutionize manufacturing processes which led to mechanized production, the second industrial revolution of the late 19th and early 20th centuries saw the harnessing of new energies of petro-carbon and electricity to master the moving assembly line that ushered in the life of mass production. As for the third industrial revolution, the convergence of technologies like software, novel materials, dexterous robots, innovative processes notably 3-dimensional printing, and a range of web-based services enabled the use of computers and electronics to automate production since mid-20th century. Building on this foundation, the fourth industrial revolution witnessed the current trend of automation and data exchange in manufacturing technologies, including cyber-physical systems, the internet of things, and cloud and cognitive computing. Possibilities of individuals connected by mobile devices globally will be enhanced by emerging path-breaking technologies in areas like artificial intelligence, robotics, autonomous vehicles, nanotechnology, biotechnology, materials science and energy storage. With revolutionary breakthrough over three centuries, industrial production has shifted steadily from material-and labour-intensive products and processes to those that are knowledge-intensive based.

This signals the emergence of a radical and new system of creating wealth that relies mainly on the creation and application of new knowledge. The sources of new knowledge, a key strategic resource in this setting, are people with the appropriate educated mindsets. Physical capital and natural resources may provide the initial endowments for wealth creation but they are both passive and exhausted factors of production. It is, however, human beings who are the active agents who accumulate capital, exploit natural resources, build social, economic and political organisations, and carry forward national development (Harbison, 1973). As society becomes increasingly knowledge-intensive in the strife for sustainable economic growth, it is social institutions like colleges and universities that will continue to play a significant and crucial role to sustain a learning society, the aims of higher education being to ‘increase knowledge and understanding for their own sake and foster their application to the concept of the economy and society; and serve the needs of

an adaptable, sustainable knowledge-based economy at the local, regional and national levels' (Dearing 1997).

1.2 Disruptive Technologies and Jobs

The Malaysia Digital Economy Corporation (MDEC) [1], defines disruptive technology as one which:

> replaces existing technology, deeming it obsolete. It's designed to succeed a similar technology that is already in use, or revolutionise the industry. It can also create a completely new industry. For example, companies such as Uber [2] and Airbnb [3] have changed the ways of industries almost overnight.

McKinsey Global Institute perceives disruptive technology as advances that will transform life, business and the global economy. It provides examples of disruptive technologies that are 'game-changers', these being mobile internet, automation of knowledge, the internet of things, cloud computing, advance robotics, autonomous vehicles, next generation genomics, energy storage, 3D printing, advanced materials, advanced oil and gas exploration/recovery, and renewable energy.

Figure 1.1 shows the most disruptive technology of 2017, the highest proportion of 37% being in autonomous vehicles. This is followed by connected devices and enterprise mobile apps of 19% each, new services and applications using bitcoins and blockchain technology of 13%, and mobile medical technology 12%.

In global businesses and industries, for example, disruptive technology as major drivers of transformation has had a steady and significant impact on jobs, from job creation to job displacement, and an improved labour productivity to a widened gap in skill sets. A study involving 371 leading global employers on the future of jobs and skills (World Economic Forum 2016) reported that (i) 65% of children admitted to primary schools will be engaged in new job types that remain unknown even today (ii) emerging job categories most frequently indicated by respondents were data analysts and specialised sales representatives (iii) based on current trends, there will be a net employment impact of more than 5.1 million jobs lost to disruptive labour market changes from 2015 to 2020 (iv) of a total loss of 7.1 million jobs, two-thirds are from office and administrative roles while a total gain of 2 million jobs is anticipated to be from computational and mathematical categories, and architecture and engineering (v) the new environment has resulted in the disruption of skill sets and displaced workers, where necessary and appropriate, are to be re-skilled or

up-skilled (vi) technical skills will need to be supplemented with strong social skills like emotional intelligence, teaching abilities and networking intelligence, and collaborative skills; and (vii) recruitment, training and management of talents call for new approaches and strategies to cope with challenges arising from disruptive technology.

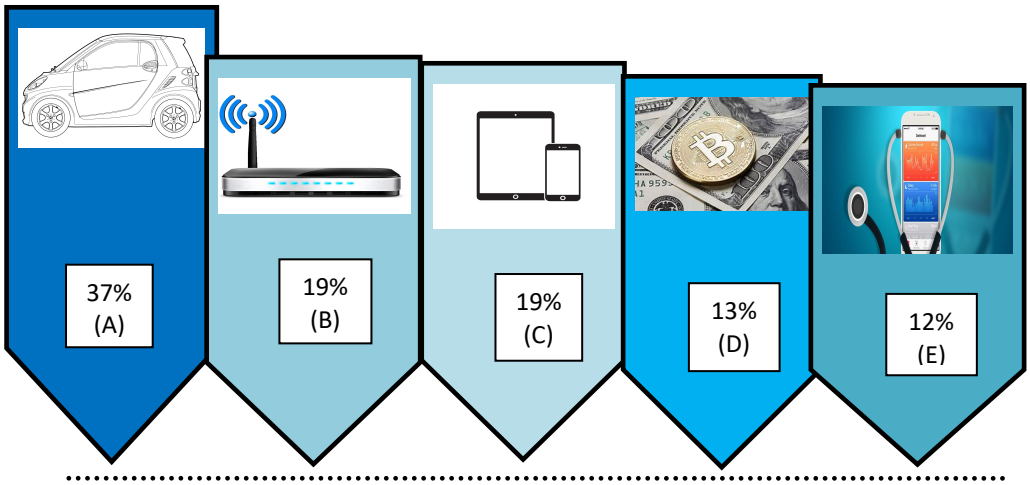


Figure 1.1: The Disruptive Technology of 2017

Notes:

(A) Autonomous vehicles - Major partnerships and investments continue to emerge, with the latest being Samsung Electronics' acquisition of car tech company Harman; and Japan is preparing driverless cars and taxis for the 2020 Olympics in Tokyo.

(B) Connected devices - Spending on the internet of things in Asia Pacific will reach US$79bil (RM250bil) by 2020.

(C) Enterprise mobile apps - The enterprise mobile app market will reach almost US$74bil (RM327bil) in 2016 and grow to US$128bil (RM566bil) by 2022, driven by the increasing mobile workforce.

(D) New services and applications using bitcoins and blockchain technology - Banks and governments across Asia are exploring blockchain applications; the region's first country-wide pilot is in Singapore, and ICICI Bank is executing India's first transaction on blockchain.

(E) The Asia-Pacific med-technology market is expected to increase from about US$88bil (RM389bil) in 2015 to US$133bil (RM588bil) in 2020.

Sources: Telenor Group which operates in markets with booming startup scenes surveyed technology buffs to understand 2017 startup trends and the challenges and views of entrepreneurs in Asia. The survey was conducted in December 2016, over Facebook and Linkedln with results from 215 respondents aged 15 to over 55 years old from Bangladesh, India, Malaysia, Myanmar, Pakistan, Singapore, Thailand and other Asian countries.

Given the rapid pace and scale of disruption brought about by the Fourth Industrial Revolution, it is critical that targeted action be undertaken by governments in collaboration with the public and private sectors to cope with transitional changes in the short-term and build up a workforce with required mindsets and talents to optimise emerging socio-economic opportunities. It necessitates a

re-thinking of basic, tertiary and life-long education and its role in the formulation of human capital in a digital economy.

1.3 Education and Human Capital Formation in a Digital Economy

That education was given greater attention as a major input in production was due to the increasing prominence of two related branches of economics. These are in the areas of development and evolutionary economics.

In development economics, the early emphasis has been on the accumulation of physical capital and not on education. Hence, early neoclassical growth models did not consider education as a major input to the production process (Harrod 1939 and Domar 1946). It was not until the early 1960s that greater attention was given to education in a growing body of empirical studies on western economies (Shultz 1961 and Denison 1962). It was Schultz who introduced the concept of human capital to explain a part of the unexplained residual in a growth accounting framework. With this, theoretical development has progressed to link education explicitly to income, trade and the family among other areas (Ozturk 2001). The pioneering work of Becker (1964) and Mincer (1974), together with other studies like Leuven (2011) and the Department of Business Innovation and Skills of United Kingdom (2013), has estimated the impact that education has on earnings.

Within the area of evolutionary economics, education and human capital were also associated with the literature on technological advance in contributing to economic growth. It was recognised that education plays a decisive role in enhancing productivity and engendering innovation, both of which are essential for increasing value-added in production. It has been argued that while physical capital is essential in the early stages of a country's development, it is knowledge and human capital that are indispensable factors in sustaining its high-income status when attained.

The provision of education in itself is insufficient for it to be an effective and efficient driver of sustained growth. It is not just the quantity of education delivered in a country. Equally important, if not more, is the quality and relevance of education provided in knowledge acquisition (learning how to learn) and application, and the enhancement of hard and soft skills to optimise social investment in education.

1.4 The Focus of This Phase of Study

The overall study 'TNE Graduate Employment Study: An Analysis of Graduate Employment Trends in Malaysia' seeks not only the perceptions of employability of several stakeholders, namely, employers, students, parents, lecturers and senior management of higher education institutions (HEIs), and the Ministry of Higher Education (MOHE) but also comparisons between the perceptions of each of these groups. While Phase I of the study involved employers, Phase II was focused on students and parents. The findings of both studies are documented in Fernandez-Chung *et al*. (2014 and 2015).

This report deals with the third and final phase of the project. Its overarching theme is the perceptions of senior management and academic staff of public and private HEIs regarding what are the attributes that the workplace desires, and approaches and strategies in fulfilling them to enhance the employability of their graduates. As with the first and second phases of the study, it is set against the backdrop of the frequent refrain of unemployed graduates in the media and occasional studies.

The specific objectives of this phase are to:

(i) understand the reasons for the choice of students and parents of the type of HEI to pursue tertiary education;

(ii) ascertain the extent to which transnational education (TNE) is provided in the HEIs and reasons for the provision;

(iii) obtain their views on the likelihood of employment from the various types of HEIs that students are registered with;

(iv) determine the extent of satisfaction regarding institutional provision to enhance employment and employability of graduates;

(v) estimate the extent of success in institutional efforts in producing holistic graduates; and

(vi) verify the importance of meeting the needs and interests of employers.

Focus-group discussion and interviews were conducted with selected senior management in the HEIs sampled and in the MOHE. These sessions provided time and space to obtain their views and insights pertaining to issues of graduate employment and employability. Some of the issues raised

were institutional curriculum and employment opportunities, efforts made by HEIs to bridge the gap between institutional output of graduates and the needs of the labour market, and educational policies of the government and their implementation and impact on graduate employment and employability.

Broadly, the TNE Graduate Employment Study provides a new dimension to the discourse on the 'un-employability' of graduates. The cross-sectional study between 2014 and 2017 enables the sampling of the four main stakeholders involved in the issue of graduate employability. In the process, the study connects the market demands for labour and the institutional supply of labour itself. Here, the main stakeholder groups involved are the employers (consumers), students and parents (process players), senior management and academic staff of HEIs (producers) and key personnel of MOHE (policy makers). As the findings unfold in this report, the perceptions, expectations and satisfaction of each group of stakeholders are examined for similarities and differences to highlight shared views or mismatches. To the extent that mismatches exist, they speak to dimensions of the education system, the labour market, business and industrial sectors or the ministries that require attention.

Specifically, Phase III of the study indicates the perceptions of senior management and academic staff regarding their preparedness of HEIs in enhancing the employability of their graduates. Their perceptions indicate indirectly how programmes, curriculum and co-curricula activities are conducted to meet anticipated outcomes or otherwise.

The release of this report seems timely in the wake of the Fourth Industrial Revolution and its impact on the way we live and work as discussed in Section 1. Any recommendations to be made to bridge the gap between employers and graduates will take into consideration the profound impact of IR 4.0 on the employment landscape. As stated in the report on *The future of jobs,* 'firms can no longer be passive consumers of ready-made human capital'. The solution which is a challenge in itself calls for close collaboration between the government, businessmen and industries, both public and private, and the education sector.

1.5 Organisation of the Report

Following the Introduction (Section 1), Section 2 gives an overview of the Malaysian context in relation to socio-economic indicators, youth and new graduate unemployment, the Malaysian education sector and the government's response to the educational challenges. Section 3 reviews

selected Malaysian studies on university education and graduate employment and employability. This is followed by Section 4 on research methodology, including the collection and analysis of data. While Section 5 focuses on the perceptions of senior management, Section 6 is on the perceptions of academic staff. Section 7 constitutes a qualitative analysis of focus-group discussion and interviews with senior management and policy makers, and Section 8 is on bridging the gap between the major stakeholders in relation to graduate employment and employability. The report ends with Section 9 on conclusions and policy implications.

2.0 THE MALAYSIAN CONTEXT

2.1 Socio-Economic Indicators

Table 2.1 shows selected socio-economic indicators and their development over the course of the 10th Malaysia Plan 2011-2015. Ensuing changes in demography or social and economic status are likely to influence the development of the workforce in relation to the demand and supply of human capital in the labour market.

The population in Malaysia was 28.6 million in 2010, 30.5 million in 2015 and about 32 million in 2017. Although the population size had increased, its growth rate had declined from 1.5% in 2015 to 1.3% in 2017. This was due to the decrease in total fertility rate from 2.2% in 2010 and 2.0% in 2015 to 1.9% in 2016, falling below the replacement level of 2.1. The chief statistician of the Statistics Department in Kuala Lumpur remarked that a fertility rate of 1.9% in 2016 was the lowest proportion ever recorded since the formation of Malaysia in 1963. (*Malay Mail Online* 2017).

In age structure, the young population (0-14) decreased from 7.8 million (27%) to 7.7 million (25%) between 2010 and 2015. The working age group (15-64) increased from 19.3 million (68%) in 2010 to 21 million (69%) in 2015. However, the old population (65 and above) increased from 1.4 million (5%) in 2010 to 1.8 (6%) in 2015. A falling birth rate and a heightening in life expectancy by 10 years to an age of 75 have contributed to an ageing population in Malaysia.

Of a total population of 28.6 million in 2010, almost three-quarters of them (20.3 million or 71%) were located in the urban areas. The urban move had increased to 22.7 million (74.4%) in 2015. In contrast, the rural population of 8.3 million (29%) in 2010 had declined to 7.8 million (25.6%) in 2015. The pull factors of urban living are likely to be better job opportunities and employment,

infrastructure and facilities (Masron *et al.* 2012). This major shift in population has resulted in the class of the urban poor as income earned does not necessarily match with the escalating costs of living in urban areas. Also, the population shift has created several issues pertaining to the basic needs of people such as housing, education, health and sanitation facilities. The most urgent of these problems are urban poverty and housing for the lower income group.

Table 2.1: Selected Socio-Economic Indicators 2010-2015

Socio-Economic Indicators	Years			
	2010		2015	
Demographic				
Population ('000)				
Total	28.6		30.5	
Fertility rate	2.2%		2.1%	
Age Structure				
Young (0-14)	7.8	(27%)	7.7	(25%)
Working age (15-64)	19.3	(68%)	21.0	(69%)
Old (65 and above)	1.4	(5%)	1.8	(6%)
Location				
Urban	20.3	(71%)	22.7	(74.4%)
Rural	8.3	(29%)	7.8	(25.6%)

Socio-Economic Indicators	Years			
	2012	2013	2014	2015
Education				
Primary school enrolment rate [1]	96.4	97.1	97.9	97.2
Secondary school enrolment rate [1]	90.2	90.4	90.0	88.3
Public university enrolment [2]	521,793	560,359	563,186	540,638
Pupil-Teacher ratio				
Primary school	12.3	12.0	11.7	11.5

Table 2.1: Selected Socio-Economic Indicators 2010-2015 (Contd.)

Secondary school	13.1	12.5	12.0
Literacy rate [3]	94.6	95.2	95.1

Socio-Economic Indicators	Years			
	2012	2013	2014	2015
Information Technology				
Mobile-cellular penetration rate per 100 inhabitants	142.5	143.8	148.3	143.8
Broadband penetration rate per 100 households	66.0	67.1	70.2	74.2
Computer literacy rate (5-69 in age) [4]	61.1 (In 2010)			
Urban	68.6			
Rural	42.1			
Infrastructure				
Rural electricity coverage (% of housing units)	95.9	96.9	97.6	98.3
Water coverage (% of population)				
Total	94.7	95.1	95.3	95.5
Rural	90.7	92.5	92.6	93.0
Urban	96.9	97.0	97.1	97.2

Socio-Economic Indicators	Years			
	2007	2009	2012	2014
Poverty Structure				
Incidence of poverty (% of household)				
Total	3.6	3.8	1.7	0.6
Urban	2.0	1.7	1.0	0.3

Table 2.1: Selected Socio-Economic Indicators 2010-2015 (Contd.)

Rural	7.1	8.4	3.4	1.6

Socio-Economic Indicators	Years	
	2010	2015
Economic		
Labour force (million persons)	12.3	14.5
Employment (million persons)	11.9	14.1
Unemployment (as % of labour force)	3.3	3.1
Real Gross Domestic Product (GDP) growth	7.2	5.0
Per capita Income		
Ringgit Malaysia ($RM)	26,882	36,078
US Dollar	8,346	9,238

Sources: Malaysia, Ministry of Finance, 2018 Economic Report. Available at treasury.gov.my; Malaysia, Bank Negara Report, 2011, 2012 and 2016, and Malaysia, Ministry of Education. *Quick Facts* (various issues).

Notes: [1] Enrolment is expressed in the percentage of school - 6+ and 11+ years at primary level and, 12+ and 16+ years at secondary level in government schools.

[2] Includes advanced diploma, certificate and pre-session levels.

[3] Aged 15 years and above with formal education, excluding non-Malaysian children.

[4] Computer literacy rate is given in Malaysia, Department of Statistics, Report on education and social characteristics of the population 2010. Available at http://www.statistics.gov.my.

This rural-urban dichotomy [4] in the Malaysian context is real as seen in the statistical provision of infrastructure (water and electricity) and computer literacy rate shown in Table 2.1. While the computer literacy rate for the population, aged 5 to 69, was 61.1% in the Census year of 2010, the urban population registered a rate of 68.6% as against 42.1% for the rural population, giving a difference of 26.5 percentage points in the urban-rural gap (Malaysia, Department of Statistics 2013).

Based on data provided by the Ministry of Finance and the Ministry of Education as shown in Table 2.1, access to education has improved between 2012 and 2015. In line with the Millennium Development Goals, Malaysia has reached near-universal levels with primary education enrolment at around 97.2% and secondary education enrolment at 88.3% in 2015. Enrolment in public universities has also increased by 3.61% to 540,638 between 2012 and 2015. With an increase in enrolment, teacher-people ratio has improved from 1:12.3 in 2012 to 1:11.5 in 2015 at the primary school level and from 1:13.1 in 2012 to 1:12 in 2015 at the secondary school level. Literacy rate has improved from 94.6% in 2012 to 95.1% in 2015.

The Malaysian economy performed relatively well and registered a Real Gross Domestic Product (GDP) growth of 5% as against the world growth of 3.2% in 2015. A decline in GDP growth from 7.2% in 2010 to 5.0% in 2015 was due to three major developments, namely, a sharp fall of global commodity prices to a post-crisis low, heightened international financial market volatility and moderation of global growth. Per capita income increased from RM26,882 in 2010 to RM36,078 in 2015. With the threshold of a high-income economy of RM49,916 as defined by the World Bank, Malaysia has a short fall of RM10,508 to attain a high-income status as envisaged by 2020 (Malaysia. Bank Negara Report 2011 and 2016).

Labour force has increased from 12.3 million in 2010 to 14.5 million in 2015. However, growth in labour productivity has decelerated, registering an average growth of 2% from 2011 to 2015. This deceleration is due partly to slower capital deepening, declining share of skilled workers in the labour force and insufficiency in technology diffusion and innovation (Organisation for Economic Cooperation and Development 2016).

Unemployment has been reduced from 3.3% in 2011 to 3.1% in 2015. However, two related issues that merit attention and action are the presence of the urban poor as discussed earlier on and youth unemployment.

2.2 Youth and New Graduate Unemployment

The aftermath of the global financial crisis of 2008 was a period of deeper than expected recession in emerging commodity-exporting countries and stagnant or uneven growth across advanced economies. This economic slow-down further aggravated the youth job crisis to a point where many young people were giving up on job search. Although global youth unemployment rate decreased from 12.7% in 2009 to 12.3% in 2011, it increased again to 12.4% in 2012 with the weakening of

the global recovery and continued to grow to 12.6% in 2013. Global youth unemployment stood at 73.4 million in 2013, placing a generation at risk and undermining its potentials for future growth (International Labour Organisation 2013).

In Malaysia, youth unemployment, especially of new graduates, contributes a growing concern for policy makers. The profile for the overall labour force indicates 28.0% with tertiary education and the remaining 72% with primary, secondary and no formal education at all. Malaysia's youth labour force tends to be more skewed towards young people with lower educational attainment. Among the cohort of 15-24 year-olds, only 16% have attained tertiary education qualification while the highest level of education achieved by a large majority of 84% was secondary education only.

The profile of unemployed youths reflects the following patterns:

- Youth unemployment rate was 10.7% in 2015 and this percentage was three times higher than that of the national unemployment rate of 3.1%. While the youth unemployment rate increased by 1.2% from 9.5% to 10.7% in 2015, the national unemployment rate increased by only 0.2% points, from 2.9% to 3.1%.

- By age-group, the proportion of youths (15-29) makes up half of the total unemployed workforce even though it consisted one-third of the labour force only.

- In relation to educational attainment, youths with tertiary education made up a relatively larger share of the unemployed, the proportion being 23%. Among those with tertiary education attainment, the unemployed rate was higher at 15.3% as against 9.8% with a non-tertiary education.

The ensuing trend that suggests a higher rate of youth unemployment among young people with a tertiary education goes against the accepted notion that the rate of return is higher to a university qualification than primary and secondary schooling. Also, this trend of youth unemployment is the very opposite of what occurs in advanced economies where attainment of qualifications in HEIs results in higher returns than that of schools. It has been suggested that this is due to the nature of global supply chains and the ensuing patterns of job creation in emerging as compared to advanced economies. Another probable reason is that Malaysia, when compared to the Korean model of prioritising educational expenditure by level over the years, expanded secondary and tertiary education before its primary school system achieved a high level of quality (Jimenez, Nguyen and Patrinos 2012).

2.2.1 Graduate Tracer Studies 2009 - 2015

The MOHE conducts an annual online survey of public and private universities, university colleges, polytechnics and colleges regarding their graduates with respect to employment, further studies, upgrading of skills, awaiting work placement and unemployment. A summary of these tracer studies pertaining to the status of graduates six months after their graduation from 2009 to 2015 is provided in Table 2.2.

In addressing the averages between 2009 and 2015 of graduates from public HEIs, 47.3% were employed, 20.8% pursued further studies and 1.7% upgraded skills, giving a total of 69.8%. Similarly, 44.9% of the graduates from private HEIs were employed, 14.3% pursued further studies and 1.3% upgraded their skills for the same period of time. The total for the private HEIs stands at 60.5%. Thus, there is little variation in the seven-year employment percentage with the average of those employed and upgraded skills between the public and private HEIs, the exception being the pursuit of further studies. Here, the variation is 6.5% with a higher proportion of graduates (20.8%) from public HEIs pursuing further studies as compared to 14.3% from private HEIs. It may be concluded that about 65% of the graduates in both the public and private HEIs are either employed, pursuing further studies and upgrading skills within six months of their graduation. Therefore, about 30% of the graduates in both categories of HEIs are either waiting for work placement or unemployed (6.8+23.4 = 30.2%) in the public HEIs and about 31% (4.6+26.8 = 31.4%) in the private HEIs. The question to ask is why about 70% of the graduates are successful in obtaining employment, pursuing further education and upgrading skills while the remaining 30% are waiting for work placement and unemployed.

2.2.2 A Detailed Analysis of Graduate Tracer Study 2015

An answer to the above question is sought by analysing, in greater detail, the graduate tracer study of 2015. The total number of respondents was 229,568. Figure 2.1 shows the distribution of graduates by employment status and of whom 53% were employed, 17.4% pursued further studies, 1.6% underwent skills upgrading, 4% waited for work placement and 24% were unemployed.

With regard to qualification, graduates with bachelor's qualification recorded the highest unemployment rate of 27.9%. Thus, was followed by the holders of diplomas (22.5%), masters degree (15.2%) and doctoral qualification (11.8). This contribution of the unemployed graduates by educational attainment is shown in Figure 2.2a.

Table 2.2: National Graduate Tracer Study on Employment Within Six Months of Graduation 2009-2015

Year of Study	Employment and Related Status of Graduates in Percentage									
	Employed		Further Studies		Upgrading Skills		Waiting for Work Placement		Unemployed	
	Public HEI	Private HEI	Public HEI	Private HEI	Public HEI	Private HEI	Public HEI	Private HEI	Public HEI	Private HEI
2009	42.5	50.1	22.5	13.0	2.6	1.9	9.1	6.4	23.4	28.7
2010	48.0	57.4	19.6	13.2	1.6	0.9	9.4	4.4	21.4	24.1
2011	51.6	56.7	19.5	11.5	1.6	1.0	6.3	3.9	21.0	26.8
2012	47.4	56.7	20.8	17.5	1.6	1.3	5.5	4.1	24.7	26.8
2013	43.9	50.3	21.8	8.7	1.3	1.2	8.5	4.6	24.5	28.8
2014	45.7	49.0	23.2	19.3	1.6	1.5	4.9	4.3	24.6	25.9
2015	51.8	50.9	18.3	17.1	1.9	1.4	4.0	4.4	23.9	26.2
Average	47.3	44.9	20.8	14.3	1.7	1.3	6.8	4.6	23.4	26.8

Sources: Malaysia. Ministry of Higher Education (various years). *National Graduate Tracer Study.* Available at http://www.graduat.moe.gov.my/skpg/english.

By fields of study, it was the graduates in sciences (27.7%), arts and social sciences (26.7%) and technical studies (23.6%) that registered the highest unemployed rates in 2015 (Figure 2.2b). They were followed by graduates in information technology and communications (23.3%) and education (11.2%).

In the graduate tracer studies, the fields of study are categorised too broadly for meaningful interpretations. For example, arts and social sciences cover a wide range of subjects from accounting, business and finance to Islamic, Chinese or Indian studies. The result that it is the graduates in sciences who registered the highest percentage of the unemployed six months after graduation does not bode well for science and technological advancement in a digital economy. It may also suggest a lack of collaboration between HEIs and industries to produce job-ready graduates or insufficient job creation in specific fields of study.

With respect to household income brackets, Figure 2.2c (p.17) indicates that graduates from lower-income households tend to have higher unemployment rate. This suggests the impact that

social-economic backgrounds may have on the learning and social advancement of graduates in the lower income cohort.

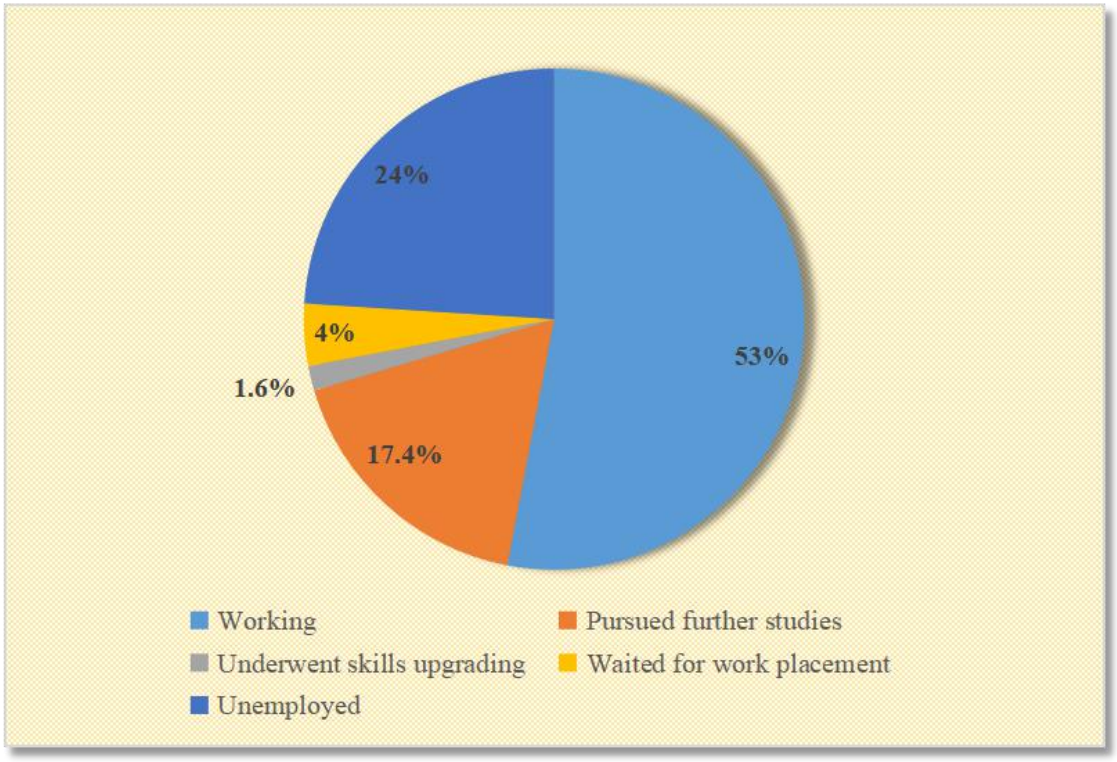


Figure 2.1 Distribution of Graduates by Employment Status

Source: Malaysia. Ministry of Higher Education.

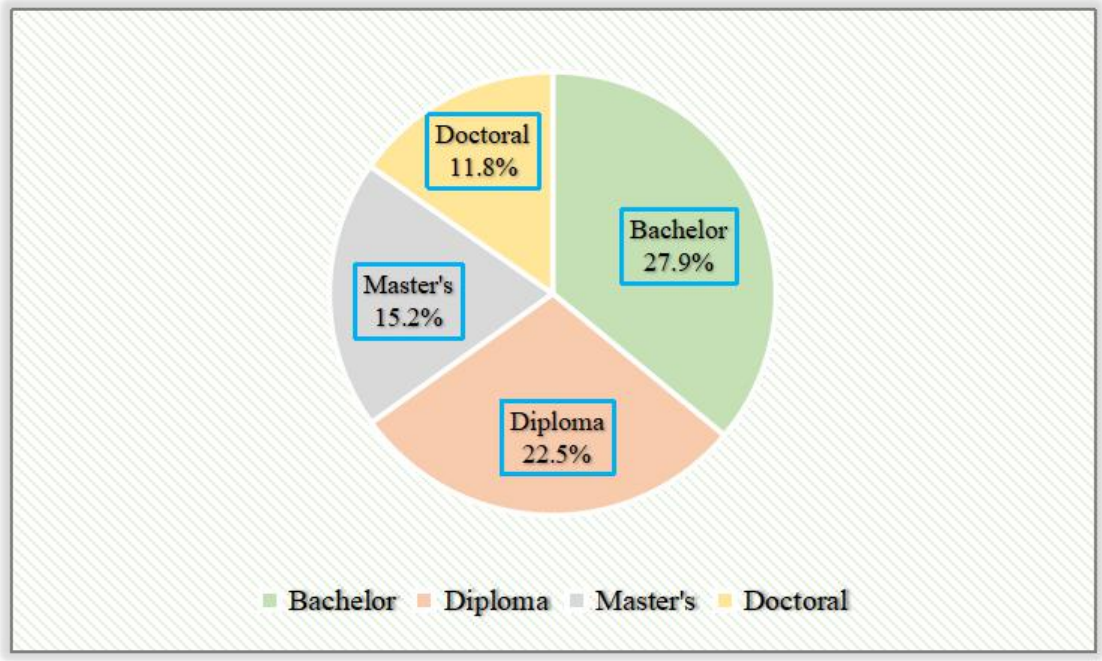


Figure 2.2a Unemployed Rates of Graduates by Educational Qualification

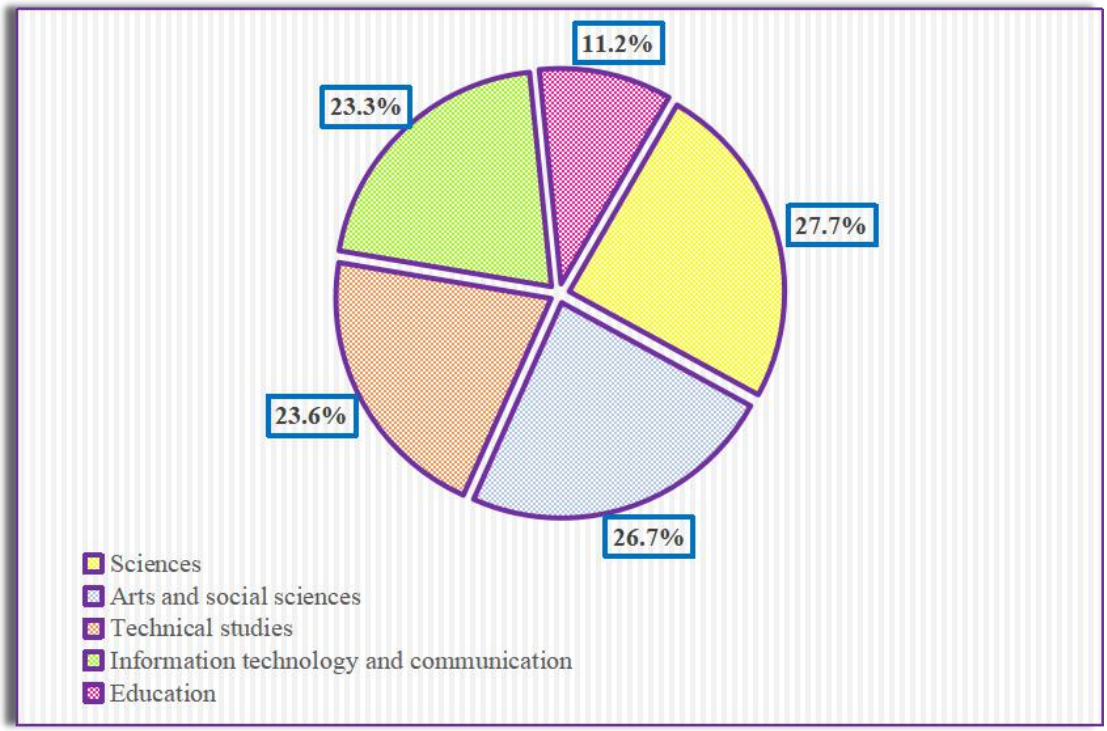


Figure 2.2b Unemployed Rates of Graduates by Fields of Study

Source: Malaysia. Ministry of Higher Education.

Note: Unemployed rates are given as a percentage of the respective group categories.

Based on the returns in the National Graduate Tracer Study 2015, 24% or 55,096 graduates remained unemployed six months after their graduation. Sketching a profile of the unemployed graduate in 2015, he or she would likely to have had a bachelor's degree, pursued a course in the sciences and come from a low socio-economic background.

While these statistics from the national graduate tracer studies show employment outcomes that speak, albeit indirectly, of employability, they are to be read with some caution. First, assessing employment six months after graduation may be too short a gestation period for a majority of the graduates to search for appropriate jobs with some success. A longer gestation period of a year seems to be a more suitable time frame to experience gainful employment. Second, the outcomes of these tracer studies do not take into consideration the possibilities of mismatches between disciplines pursued and the type of jobs employed in by the graduating students. Third, there is also the likelihood that graduates, especially those from high socio-economic brackets, may want to take a short break or a gap year without the need to seek immediate employment on graduation. Fourth, the date pertaining to the commencement and completion of programmes, academic years and convocations vary not only between public and private HEIs but also within a private HEI itself, the latter being determined by its collaborative partners across countries like the United Kingdom, United States and Australia. Fifth, the outcome of the tracer study on employment merits a

considerable score in determining the status of HEIs in ranking exercises such as SETARA[5] and MyQuest[6] undertaken by the Malaysian Qualifications Agency (MQA) of the MOHE. As such, there may be a tendency for graduates and the management of HEIs to inflate employment figures and deflate unemployment statistics to attain creditable assessment, from a 1-star to 6-star rating in SETARA and MyQuest.

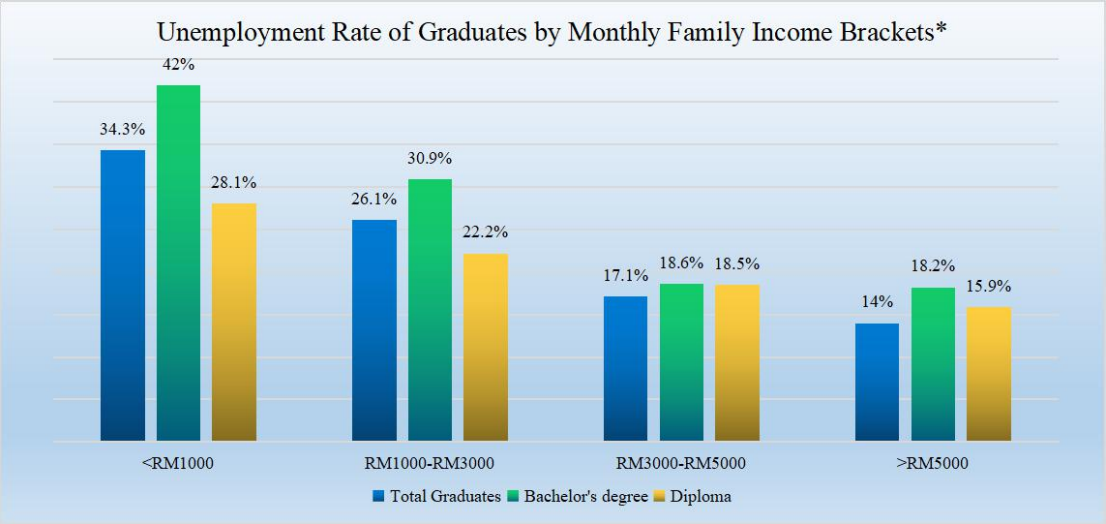


Figure 2.2c: Unemployment Rates of Graduates by Monthly Family Income Brackets

Source: Malaysia. Bank Negara Annual Report 2016, p.102.

Note: Unemployment rates are expressed as a percentage of respective group categories.

2.2.3 Job Study of Jobstreet 2017

The Jobstreet.com survey of August 2017 sampled 472 managers in Malaysia regarding the employability of fresh graduates. A majority of the managers surveyed (70%) considered fresh graduates of an 'average' quality in employability. While 6% indicated that fresh graduates were of a 'good' quality, about a quarter assessed them to be 'bad' in relation to their employability for job securement. The poor ratings given were not due to academic qualifications but to the attitudes and communication skills shown at interviews or at work.

Figure 2.3a provides the top five reasons why fresh graduates would not be employed. They are unrealistic expectations for salaries and benefits (68%), poor command of the English language (64%), selective about the job or company (60%), low level of communication skills (60%) and a demonstration of weakness in character, attitude and personality (59%).

Graduates with competitive advantages in job search would have, as shown in Figure 2.3b, held leadership positions (39%), attained high academic scores (20%) and involved in extra-curricular activities (20%) and participated in volunteer services.

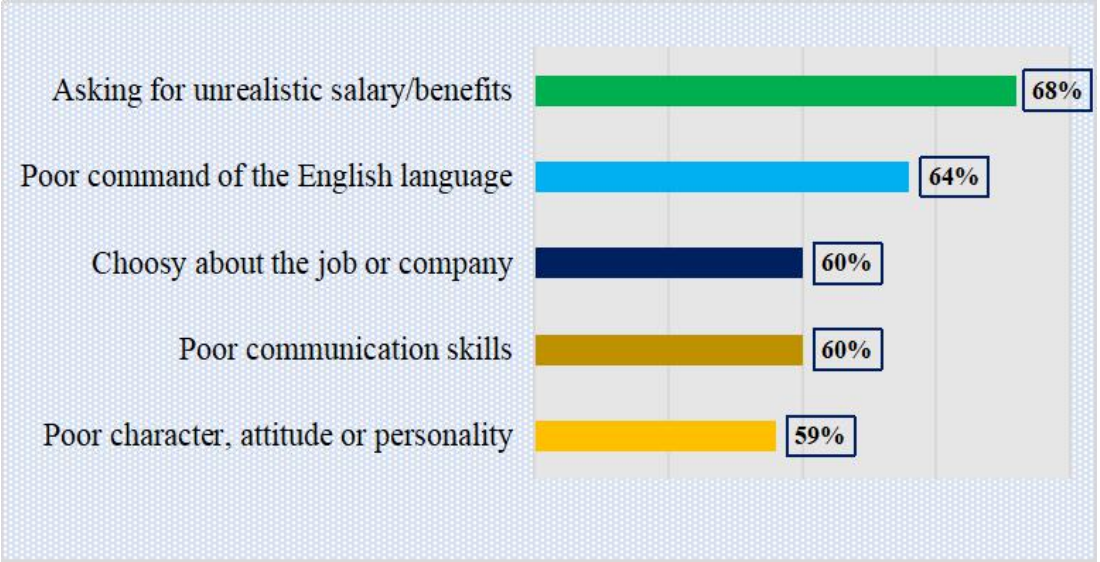


Figure 2.3a Top Five Reasons Why Fresh Graduates are Unemployed

Source: JobStreet.com

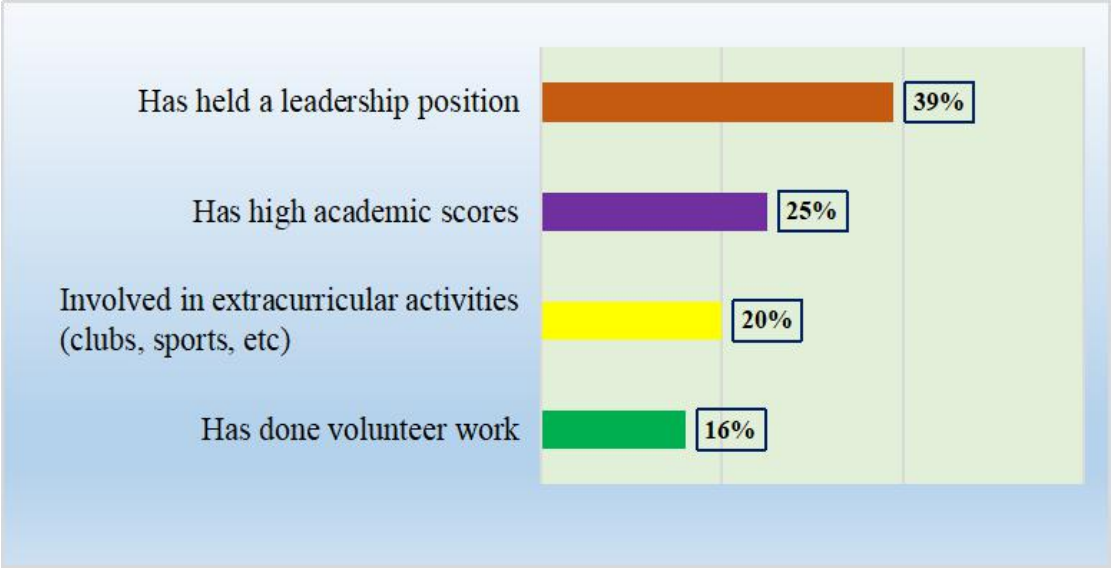


Figure 2.3b Attributes of Graduates With Competitive Advantages in Job Search

Source: JobStreet.com

2.3 THE MALAYSIAN EDUCATION SECTOR

2.3.1 The Education System

Figure 2.4 illustrates the Malaysian education system and its pathways from primary and tertiary education to postgraduate studies. The Malaysian education system has two main tracks, namely, academic and vocational. While academic education has been, traditionally, the focus of attention, vocational education continues to be perceived, generally, as a refuge for the academically unsuccessful. This is reflected clearly in terms of the size of the two tracks in the education system. Of a total of 2.3 million secondary school students in 2013, 93.2% of them (2.1 million) were enrolled in the regular and fully-residential schools. In contrast, the proportion of students enrolled in vocational and technical schools was 1.35% (31,055) and 0.43% (9,862) respectively.

On completion of lower or upper secondary and tertiary education, students can select their education track. Students who complete their primary education can continue in junior vocational schools and in vocational and technical institutes at the lower and upper secondary school levels. This means that students' choice of streams (arts, science, vocational and technical) is made after nine years of schooling, and between the tenth and eleventh year. Movement between the academic and vocational/technical streams is also possible for students in tertiary-level institutions. It is to be noted that while polytechnics, community colleges, and technical and vocational institutes are classified under the academic track because their movement upwards are to colleges, university colleges and universities, they also constitute a part of the vocational education system.

2.3.2 Educational Funding

The education sector is not wanting in terms of funding. As shown in Table 2.3 (p.21), Malaysia spends the highest proportion of its total public expenditure on education. Thus, expenditure has increased slightly more than three-fold from RM16.7 billion in 2005 to a peak of RM56 billion in 2015. This represents an annual growth rate at 14.5%.That education expenditure as a percentage of total public expenditure has risen between 2005 and 2015 is only because the latter has grown even slower at 9.1%.

On a regional basis of selected countries in East Asia, Figure 2.4 shows their public expenditures on primary, secondary and tertiary recurrent spending and non-allocated recurrent spending as a

percentage of gross domestic product (GDP). Once again, Malaysia spends the highest proportion of its GDP on education (a total of 3.7% - 1.3% on primary education, 1% on secondary education and

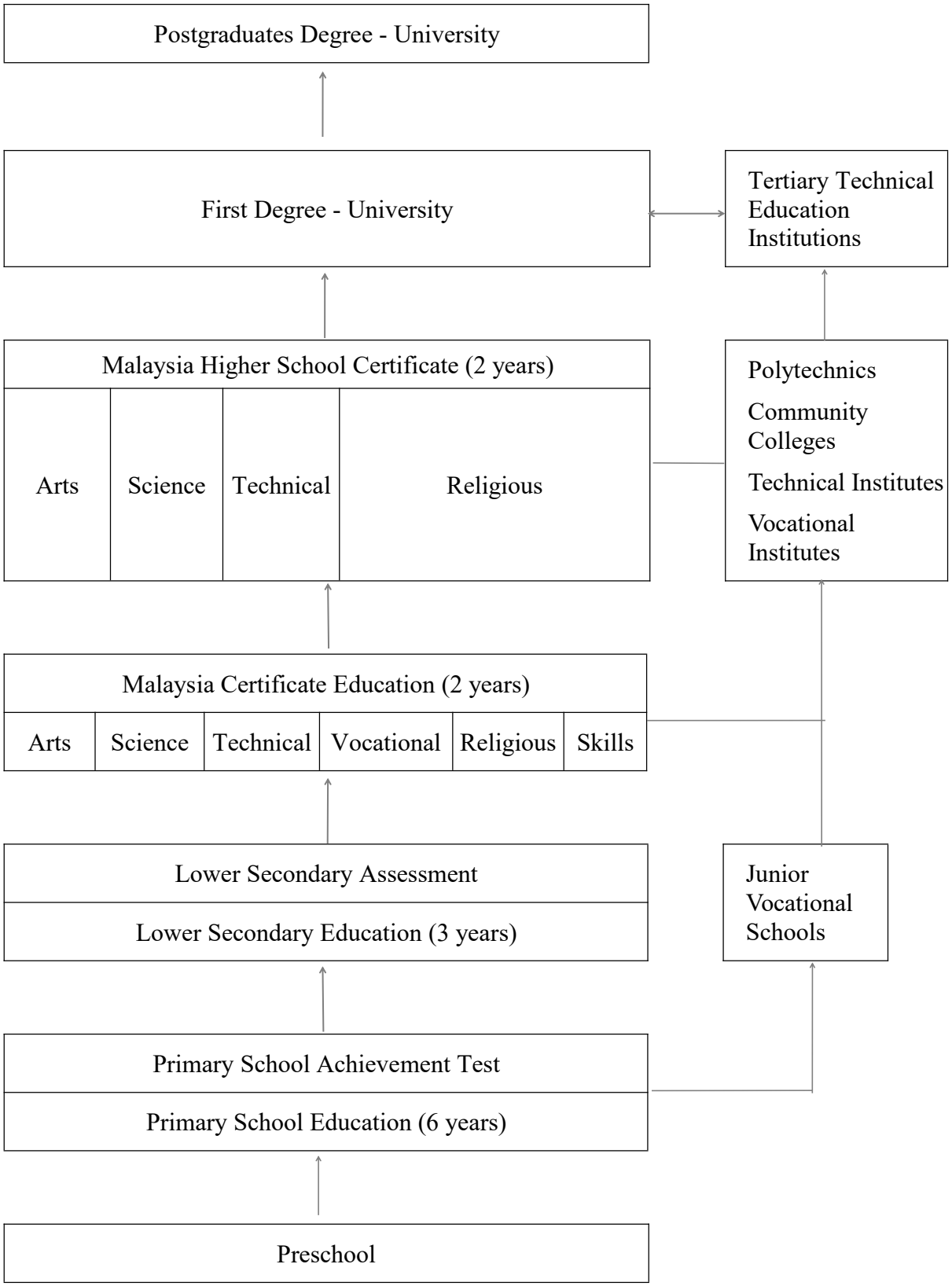


Figure 2.4 The Malaysian Education System
Source: Ministry of Education

1.4% on tertiary education), followed by Korea (3.5%), Thailand (3.2%), Indonesia (3.1%), Philippines (2.1%) and Singapore (2.0%). While Indonesia is the largest public spender in terms of primary education with 1.8% of GDP, South Korea spends the most public money on secondary schooling with 1.7% of GDP. In relation to tertiary education, Malaysia is the largest public spender with 1.4% of GDP. Hence, as a percentage of GDP, it is significant that Malaysia (1.4%) spends almost twice as much as Singapore (0.9%) and South Korea (0.5%) on tertiary education, the latter two countries being perennial top performers in international scholastic tests like Trends in International Mathematics and Science Study (TIMSS) and Programme for International Student Assessment (PISA) and much better placed in university rankings.

Table 2.3: Education Expenditure and Public Expenditure 2005-2015

Year	Education Expenditure (RM bil)	Annual Growth Rate (%)	Public Expenditure (RM bil)	Education Expenditure As Percentage of Public Expenditure	Annual Growth Rate (%)
2005	16.7		117.4	14.2	
		18.6			16.4
2006	19.8		136.7	14.5	
		11.6			16.7
2007	22.1		159.5	13.9	
		33.5			10.8
2008	29.5		176.8	16.7	
		6.1			17.6
2009	31.4		207.9	15.1	
		-2.9			-7.9
2010	30.5		191.5	15.9	
		29.5			10.7
2011	39.5		212.0	16.7	
		27.1			9.8
2012	50.2		232.8	16.0	
		-22.9			8.1
2013	38.7		251.6	18.6	
		41.1			5.0
2014	54.6		264.2	20.7	
		2.6			3.7
2015	56.0		273.9	15.6	
Total Average	35.4	14.5	202.2	16.2	9.1

Source: Malaysia. Ministry Education. *Quick Facts* (various issues) and Budget Speech (various years).

2.3.3 Access, Relevance and Quality Perspectives

2.3.3.1 Access to Education

Education, as a whole, has been accorded the highest priority by the Malaysian government as seen in its substantial budget allocation. The question may be asked as to what education has achieved in terms of its performance from the perspectives of access, relevance and quality.

In terms of participation, Malaysia has almost reached its goal of providing universal basic education with an enrolment rate of 97.2% at the primary education level. Being near to the provision of universal primary education, there is still an estimated 120,000 who remain outside the school system (United Nations Country Team (UNCT) Malaysia 2011). A good enrolment rate 88.3% has been reported at secondary level in 2015, surpassing the average of 83% for upper middle-income countries though not meeting 101% for high-income OECD countries. Dropout rates have improved. The primary to secondary transition dropout rates declined from 9.95% in 2000 to 2.71% in 2014. In numerical terms, the number of dropouts has declined steadily from 45,200 in 2000 to about 12,898 in 2014 (UNDP Malaysia, 2016). Students from poorer families are more likely to drop out of school and at the secondary level, the rates are significantly higher for rural than urban schools.

The substantial increase in enrolment is not only seen in primary and secondary education but also tertiary education, in particular. As shown in Table 2.4, foreign universities with campuses in Malaysia increased by 80% and private universities by 45.7% between 2009 and 2015. While enrolment increased by 28.8% in public universities from 2009 to 2015, student numbers increased by 21.1% in private universities for the same period of time. This increase has been fuelled by the dramatic expansion of private tertiary education, especially after the enactment of the *Private Higher Educational Institutions Act 1996* (Act 555). A substantial increase occurred in the enrolment of female students that led to a reverse of gender disparity at the higher levels of education. In 2015, the male-female student ratio in public universities was 1:1.63, indicating that girls tend to stay longer than boys in the education system. Thus, in quantitative terms, increases in education spending have led to an expansion of the country's stock of human capital.

As evidence of this success, Malaysia achieved all of the Millennium Development Goals (MDG) at the United Nations Development Programme (UNDP), two of which are universal primary education (MDG1) and gender equality in education (MDG3) (United Nations 2011). Also, in the

Human Capital Index (HCI) of the World Economic Forum, Malaysia has been ranked a creditable 22nd out of 122 countries overall in 2013 although it was placed 33rd only in education (World Economic Forum 2013). The country's ranking in the HCI dropped to 52nd in 2015 before it recovered to a rank of 42nd in 2016 and 33rd in 2017. Malaysia's score card showed a rank of 41 only on education in 2017.

However, human capital is not all about numbers - the amount spent on education and the number of persons enrolled in schools and HEIs. For education to be a major catalyst for human capital development, it has to be of relevance and quality to meet the needs of a rapidly changing economic and technological landscape.

2.3.3.2 Relevance in Education

Significant government expenditure on education has increased the quantity of graduates but the HEIs are faced with the challenges of being more effective in producing job-ready graduates with the skills required by industry and becoming more efficient as fiscal consideration weighs on overall funding.

Presently, science literacy at a level of 46% (U.S. Mission to ASEAN 2016) in Malaysia is insufficient for its people to participate in and benefit fully from a knowledge economy, let alone to meet the challenges under the 11th Malaysia Plan 2016-2020 in terms of scientists, mathematicians, technologists and engineers required to boost and sustain the global competitiveness of the Malaysian economy. While advanced countries like the United States and Germany have a strong 30% workforce in science, technology, engineering and mathematics (STEM) fields, Malaysia's STEM-related workforce contributes a proportion less than 3%. This deficiency in STEM-related studies calls for a new mindset in the science acculturation process to enable Malaysians to be more effective and efficient learners, creators and users of knowledge.

Based on the findings of the Academy of Science Malaysia, the country needs 270,000 science students at the *Sijil Pelajaran Malaysia* (SPM or Malaysian Certificate of Education) level annually. Currently, the number of science students enrolled at the SPM level is 90,000 only, a shortfall as high as 200%. Furthermore, data indicates that of the students taking STEM-related subjects in school, 12% migrated to non-STEM programmes at the tertiary level. The target ratio of 60:40 science and arts students respectively at the tertiary level and set by the Planning Committee of Higher Education in 1967 has yet to be met.

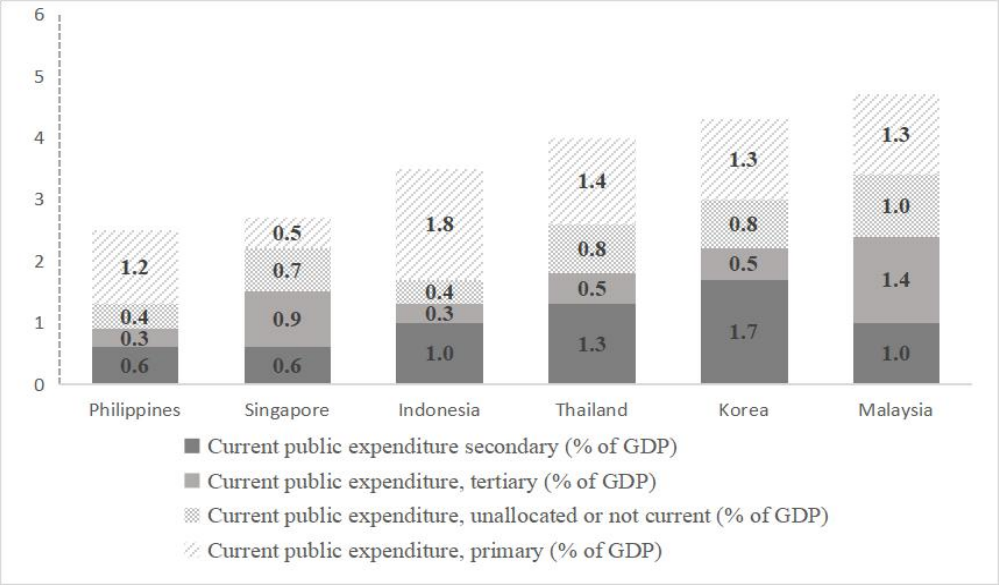


Figure 2.5: Public Expenditure by Educational Level of Gross Domestic Product (GDP) in Selected East Asian Countries

Source: Adapted from World Bank (2012).

Table 2.4: Indicators Showing the Expansion of Higher Education in Malaysia 2009-2015

Indicators	Years				
	2009	2011	2013	2015	Percentage Increase 2009-2015
No. of Institutions					
Colleges	348	373	391	401	15.2
Public universities	20	20	20	20	0.0
Private universities	35	41	50	51	45.7
Foreign universities	5	5	8	9	80.0
No. of Students Enrolled					
Public universities	437, 420	508,256	560, 359	563, 186	28.8
Private universities	206, 197	210, 821	248, 457	249, 639	21.1

Source: Ministry of Higher Education and Casadas Research.

Table 2.5 shows the enrolment of students by STEM vs non-STEM subjects in public universities between 2009 and 2013. A majority of the students pursued non-STEM subjects and in 2013, the ratio stood at 1:1.3 (science : arts). Forty years on, the target of 1.5:1 has not been attained.

Various reasons have been given by secondary school students for shunning the science stream at the Form 4 level. They perceived science subjects to be 'too difficult to learn', 'boring', exclusively for the exceptionally bright students' and that 'science is not lucrative'. The then Deputy Director of the Curriculum Development Division of the MOHE reiterated, realistically, that the weak response to the sciences was due to a lack of jobs in the field and that 'science students in secondary schools with good grades are taking up law, accountancy, business and the like because the reality is that good jobs are in those areas'.

There is an inclination to consider the education system to be the panacea for socio-economic and cultural issues in the Malaysian society. In the context of motivating secondary and tertiary students to pursue STEM or science, technology and innovation (STI) subjects, the support of the industry is essential in the creation of appropriate jobs that are high-paying and high-skilled, using technology and innovation as sources of growth.

Table 2.5: STEM vs Non-STEM Enrolment in Public Universities by Percentages 2009-2013

Year	Student Enrolment in Public Universities			
	STEM	Percentage	Non-STEM	Percentage
2009	190, 444	43.5	246, 976	56.5
2010	204, 302	44.1	258, 478	55.9
2011	222, 457	43.8	285, 799	56.2
2012	224, 217	43.0	297, 576	57.0
2013	242, 867	43.3	317, 492	56.7

Source: New Straits Times Press (M) Berhad 2015. Available at www.nst.com.my

2.3.3.3 Quality Education

Studies have shown the strong correlation between quality education and economic growth (Hanushek and Kimko 2000; Hanushek and Woessmann 2007 and OECD 2010). Quality education is critical in enhancing human capital development which, in turn, improves labour productivity of the workforce and attracts investment in high value-added economic activities.

Education in Malaysia has been more focused on quantitative rather than qualitative output. The consequence of this focus is that the quality of education in Malaysia is not up to the standard of Asian countries which have scored highest in world ranking exercises. This performance, together with challenges in the education system, is manifested from international bench marking tests, namely, Trends in International Mathematics and Science Study (TIMSS)[7] and Programme for International Assessment (PISA)[8].

In contradiction to strong performance in national assessments, Table 2.6 shows that Malaysia has not performed strongly at the international level with recent decline in TIMSS and weak performance in PISA. What these tests show are that:

- In both mathematics and science, Malaysia falls behind the leaders made up of the newly industrialised economies. As for reading skills, Malaysia is well behind economies with more recent histories of teaching and learning the English language comparatively.

- A more worrisome observation is that the absolute scores have declined over time, with mathematics and science scores materially lower in 2011 compared to 1999 in TIMSS. However, the absolute scores for mathematics and sciences have improved considerably in 2015 (from 440 to 465 and 426 to 471) respectively.

- Malaysia's reading scores in PISA is suggestive not only of poor but also a falling level of English language skills at a very time when globalisation demands an ability to communicate in English, presently the *lingua franca* of commerce.

Making use of the performance of twelve East Asian countries in TIMSS from 1999 to 2007, Macdonald (2012) explores the association between education quality and gross enrollment, and public expenditure on education and quality. TIMSS, conducted during grade 8, measures the knowledge and cognitive skills that pupils have acquired over the first seven years of their

schooling. Therefore, TIMSS provides one of the measures of the quality of primary schooling. Using specifically the scores in mathematics, Macdonald's findings relate to the following:

- Malaysia has a high gross enrolment rate of 91%, the number of grade 8 students divided by the number of 14 year olds. When students in TIMSS do not have 'some knowledge of whole numbers, operations and basic graphs' are excluded from the calculation, the gross enrolment drops dramatically from a high of 91% to a moderate 75%. If the standard is raised higher by excluding from the calculation students who fail to 'apply basic mathematical skills in straightforward situation, the number drops very considerably from a moderate 75% to a low of 45%. The drop in numbers leads to a gross enrolment of less than half of all 14 year olds in four middle-income countries - Malaysia, Thailand, Indonesia, and the Philippines.

- Since 1999, the mathematics scores in TIMSS have fluctuated considerably in East Asia. The average percentage change in TIMSS scores in mathematics between 1997 and 2007 was negative for five countries and they are Malaysia (-4.4), Thailand (-2.8), Singapore and Hong Kong SAR (-0.9 each) and Japan (-0.8). The Philippines increased education quality to a greater extent than its neighbouring countries, improving the performance in mathematics by 9.6% between 1999 and 2007. Korea and Indonesia were the other two countries showing a positive change of 0.8% and 0.3% respectively.

- Of the 12 East Asian economics featured in the study by Macdonald, Malaysia is the biggest spender of public expenditure on education, especially at the tertiary level. In plotting the progress in TIMSS mathematics achievement and the growth in per pupil primary education expenditure for the tested cohort of students, it was shown that most of the regional economies fell into the bottom right quadrant. This very quadrant indicated that although their per pupil primary education has increased, their TIMSS performance has declined even though increases in spending have been fairly large. The economies are those in Malaysia, Thailand, Hong Kong SAR and Japan. Quality education is not all about spending, and educational policies and practices are crucial.

Table 2.6: Malaysia's Performance in TIMSS and PISA Benchmarked Against Selected East Asian Countries 1999-2015

Subject and Country	TIMSS Scores and Year					PISA Scores and Year		
	1999	2003	2007	2011	2015	2009	2012	2015[a]
Mathematics								
Malaysia	519	508	474	440	465	404	421	446
Korea	587	589	597	613	606	546	554	524
Taiwan	585	585	598	609	599	543	560	542
Science								
Malaysia	492	510	471	426	471	422	420	443
Korea	549	558	553	560	556	536	538	516
Taiwan	569	571	561	564	569	520	523	532
Reading								
Malaysia						414	398	431
Korea						539	536	517
Taiwan						495	523	535

Source: TIMSS and PISA database

Note: [a]Malaysia's performance was not featured in PISA 2015 ranking for mathematics, science and reading. Further details are given in Endnote 8.

Educational effectiveness and quality education in Malaysia were found wanting in an OECD (2016) economic survey of the country. School-age students have achieved below average scores on PISA. Scores for mathematics, science and reading were among the lowest of the 65 countries surveyed in 2012. The study concluded that education outcomes remain to be influenced by socio-economic status of the cohorts who participated in PISA 2012. Almost 70% of the socio-economic and culturally disadvantage students were categorised as low performers in mathematics by PISA. This, compared to about 30% of advantaged students with a 40% point differential, is well above the gaps found in participating Southeast Asian countries and 12% points higher than the OECD average.

2.4 The Government's Response to the Educational Challenge

Despite quantitative achievements in the 10th Malaysia Plan 2011-2015 with respect to creating more jobs and maintaining full employment, mainstreaming and broadening access to quality technical and vocational education and training (TVET) programmes, upskilling the workforce through life-long learning, and improving education delivery though better access and quality, key challenges remain.

While the number of jobs increased, most of them were in semi-skilled occupations which, in turn, contributed to relatively low labour productivity gains. Wages are too low for workers to achieve a minimum acceptable living standard, especially in the cities, and there is high dependence on low-skilled foreign labour. The supply of TVET graduates in quality and quantitative terms has yet to be aligned fully with industry needs. TVET is still perceived by students to be a less attractive educational and career pathway. More effective and efficient lifelong learning programmes are required to support the re-skilling and upskilling of the workforce. Substantial improvements from the quality of teachers and academic staff to the governance and operation of schools and HEIs are to be made to enhance the performance of the education system in relation to access, relevance, quality, effectiveness and efficiency.

Therefore, Malaysia is committed to its goal of developing a highly educated and skilled workforce to enhance labour productivity and support a value-added approach to development. Commitments relate to the following activities (Martinez-Fernandez and Powell 2009):

(a) Establishment of a Ministry of Human Resource Development Fund to encourage employers' involvement in training. Set up in 1993, employers are required to pay a levy from 0.5% to 1% of their monthly payroll to the fund which the employer can use to claim reimbursement for training or training grants.

(b) Development of entrepreneurs and entrepreneurial values, especially amongst Bumiputera and the rural population, via activity centres and skill institutes set up by the MARA Institute of Technology. Basic skills and entrepreneurial training for young people who have failed the school system are given GIATMARA training centres.

(c) Provision of loans to unemployed graduates for the acquisition of vocational skills and the starting-ap of new businesses.

(d) Formulation of an apprenticeship scheme in line with the German system of 70% training on-the-job and 30% off-the-job in a training institution.

(e) Setting up of National Youth Skills Institutes that provide training for the unemployed youth on skills that are in demand by employers.

Acknowledging the importance of generic skills in enhancing the employability of graduates, the then Minister of Higher Education, Datuk Mustapa Mohamed, instituted in 2006, a model of generic skills comprising 'communication skill, critical thinking and problem solving, teamwork, lifelong learning and information management, ethics and professional morals, entrepreneurship, and leadership skill' for implementation in the curriculum of HEIs, beginning in 2007. (Yassin *et al*. 2008).

In the effort to address these challenges, a number of task force has been formed by the government to develop plans, blueprints and roadmaps, some of these plans and blueprint which address specifically human capital development, the education system and graduate unemployment are highlighted below.

The Eleventh Malaysia Plan 2016-2020: Anchoring Growth on People identifies six mutually reinforcing strategic thrusts to help the country to address challenges and enhance competitiveness in a rapidly changing economic, technological and geopolitical landscape. These thrusts are enhancing inclusiveness towards an equitable society; improving well-being for all; accelerating human capital development for an advanced nation; pursuing green growth for sustainability and resilience; strengthening infrastructures to support economic expansion, and re-engineering economic growth for greater prosperity. Also, six game-changers to accelerate Malaysia's development are highlighted. They are unlocking the potential of productivity, lifting the bottom 40% households towards a middle-class society, enabling industry-led technical and vocational education and training, embarking on green growth, translating innovation to wealth, and investing in competitive cities.

Malaysia Education Blueprint 2013-2025 (Preschool to Post-Secondary Education) is intended to provide a comprehensive framework to support the 'rapid and sustainable transformation' of the country's education system to enable Malaysia to 'compete with the best in the world'. The blueprint identifies the challenges faced by the education system, establishes a vision for the next decade, and proposes a comprehensive transformation programme to realise this vision. This

transformation programme is built around eleven major shifts (Ministry of Education 2012 : E15-16). These shifts relate to the access to quality education, proficiency in English, together with a range of institutional initiatives, to release the above objectives. Significantly , the blueprint recognised the existences of multiple pathways, namely, academic, vocational and religious, and proposed measures to strengthen each of them.

Malaysia Education Blueprint 2015-2025 (Higher Education) generates major shifts in the way the higher education system operates to achieve the primary goal of the MOHE. The Ministry aspires to create a higher education system that ranks among the world's leading HEIs and enables Malaysia to compete in the global economy. The shifts have been formulated to enhance further excellence in the higher education system. While the first four shifts focus on outcomes (holistic; entrepreneurial and balanced graduates; talent excellence; nation of lifelong learners and quality TVET graduates), the last six shifts highlight enablers (financial sustainability; empowered governance; innovation ecosystem; global prominence; globalised online learning and transformed higher education delivery).

National Graduates Employability Blueprint 2012-2017 was developed by a task force set up accordance with the budget in 2013. The overarching objective of this blueprint is to support the national vision of producing competent graduates to fulfil national and international manpower needs with the target of achieving 75% of graduates employed within six months of graduation. Significant graduate employability issues and challenges have been identified and they are unknown market size and needs for a high income economy; unknown intake and exit attributes except for a few professional courses; poor intake attributes; the notion that industry prefers ready-made instead of fundamentals; stop-gap measures versus immersion of institutions of higher learning, and not obtaining the right choice of courses. The blueprint is expansive of its strategic rhetoric and budgetary allocations but rather silent on specific measures to operationalise strategies.

There are many other sectoral roadmaps with different objectives, strategies and outcomes. Some examples are the Human Capital Development Blueprint (2018- 2025), the Financial Sector Blueprint 2011-2020 and the Management and Human Resource Development Master Plan 2050.

The impact of reform efforts rests heavily on the capacity of personnel and institutions to implement policies and practices as intended in ways that are open, transparent and accountable. As lessons are learnt in the course of implementation, authorities have to adapt and adjust targets in line with the changing socio-economic and political landscapes. In reality, there seems to be a

significant gap between policy intent and implementation in the Malaysian situation. There is insufficient capacity and coordination for the effective and efficient implementation of reform efforts. Indeed, as in most other countries, Malaysia has ample room for improvement in bridging the gap between planning and implementation, including monitoring, evaluation and reviewing in the process.

3.0 REVIEW OF SELECTED MALAYSIAN STUDIES

3.1 Revisiting Employability

Universities have played a central role in human resource development, producing graduates perceived as potential key players in the drive towards enhancing value-added products and services in the Malaysian labour market. As institutions of higher learning, universities generate, disseminate knowledge and focus on skills which are transferred to graduates who, when employed, apply them in their workplaces as active members of the labour force. Degrees and awards certified by universities are used by employers to screen potential recruits in relation to their capabilities and capacity for work. Besides imparting knowledge and focusing on skills, universities nuture graduates in character-building and personality development to enhance their effective participation in the labour market, community and society at large.

In the Malaysian context, this traditional link between knowledge, skills and personality traits produced through universities and those that employers find necessary had been considered fairly flexible and accommodating to situational needs through three decades of rapid economic growth from the 1960s to mid-1985. Real GDP grew at an average annual rate ranging from a moderate 5.1% to a high of 7.9% during this period of time. As such, employers were reasonably responsive to the acceptance of university graduates with the required academic credentials, generic skill profiles and specific job specifications as advertised. This is evident in that about 5,400 new graduates from then only five local public universities [9] entered the labour market annually (Ungku Aziz 1987).

However, this corresponding link between universities and the labour market was perceived, over time, to have been blurred, ruptured and even decoupled (Tomlinson 2012). This dramatic turn in the link was brought on by impactful and structural changes in the Malaysian economy and, at the same time, a significant increase in the number of new graduates for entry into the labour market.

Rapid economic growth between 1960s and mid-1980s gave way to an economy that was sluggish in the face of internal and external challenges. There was the Asian Financial Crisis (1997-1998), the global Financial Crisis (2007-2008), steep fall in global oil and commodity prices (2014-2015) and the sliding value in exchange rate of the Malaysian *ringgit* (2014-2015). Being a market-driven economy that relies on oil for revenue and a wide range of commodities for export earnings, the real GDP growth rate was 5.0% in 2015. (Malaysia, Bank Negara 2015).

Given this economic landscape, the Malaysian economy has remained concentrated on the low and middle-skilled job as domestic industries stayed in low-value added activities. Industrialists were cautious in practice, emphasising internal efficacy and relying on cheap foreign labour instead of pursuing technology and innovation as a source of growth.

Resulting from a vast expansion of higher education, especially the private education sector, the potential workforce was becoming more educated. From a low of 5,400 new graduates entering the job market in the mid-1980s, the number had increased significantly to a staggering 225,533 in 2015, representing an increase of 4,076%. Matched against a slow-down in economic growth, the demand for fresh graduates was anaemic as seen from the online job postings for entry-level positions for graduates which had remained largely stagnant since 2012.

However, employers were very effective in registering their dissatisfaction that the rising youth unemployment was due primarily to a mismatch between supply of and demand for labour. Employers focused on skill shortages as a key factor which prevented them from making investments to move up the value chain. Central to this change in dynamics between higher education and the labour market (a chicken and egg situation) has been the issue of employability of graduates. It raises the question of whether HEIs can contribute to graduates' output and value-added in the labour market and, if so, how this can be attained.

In a sense, the last word on employability is that of the employer, the consumer of services that should embody that attribute. In the first phase of this study on employability of graduates, that attribute was found to be the possession of desirable qualities that make up the values, personality, knowledge and skills which meet the needs and interests of the recruiting companies (Fernandez-Chung *et al*. 2014).

While the specificity of context and industrial structure is stressed in Phase I of the three-phase study on employability of graduates in Malaysia, there remains some definitions that define more

broadly the concept of employability. For example, the Higher Education Academy (Pegg *et al*. 2012) defines employability as 'a set of achievements - skills, understandings and personal attributes - that make graduates more likely to gain employment and be successful in their chosen occupations which benefit themselves, the workforce and the economy.

Harvey (2001) acknowledged the existence of multiple definitions but noted that these fall into two groups. The first relates to 'the ability of the student to get (and retain and develop in) a job after graduation. The second is concerned 'with enhancing the students' attributes (skills, knowledge, attitudes and abilities) and ultimately with empowering the student as a critical life-long learner'.

In Phase II of the study, the respondents are left to articulate their subjective understanding of employability rather than straightjacket them to specific definitions or criteria. However, based on the review of studies concerning students' perception of employment and employability in Malaysia, there is the likelihood that beyond some general notion of the concept, employability is not well understood by students.

Being a subjective concept, the definition of employability needs to be revisited in the final phase of the study since it is interested in the views of senior management and academic staff of HEIs, not employers or students and parents. The use of the same definition would imply that the identification of the concept of the various groups of stakeholders coincides. If so, a part of the study's search for possible perception mismatch is then defined away. Therefore, this section provides alternative definitions of the concept of employability.

> Employability refers to a set of achievements related to skills, understandings and personal attributes that make graduates more likely to gain employment and be successful in their chosen occupations which benefit themselves, the workforce, the community as well as the economy. As a consequence, many higher education institutions have attempted to embed skills in the curriculum-generic skills (communication skills, team working and personal attributes [like] resilience and commitment.) (Moreau and Leatherwood 2006).

Moreau and Leatherwood elaborate further that:

> For the individual, employability depends on the knowledge, skills and aptitudes they possess, the way they use those assets and present them to employers and the

> context (for example, personal circumstances and labour market environment) within which they seek work. Universities are urged to ensure that they produce 'employable' graduates and graduates themselves are exhorted to develop continually their personal skills, qualities and experiences in order to compete in the graduate labour market.

There is a suggestion in the above quotations that individuals themselves are responsible for their own success and failures in the labour market. People are ultimately responsible for their own employability.

Reflecting the likely scenario of graduate employability and the future of work, Hillage and Pollard (1999) refer employability to three categories of abilities. They are the ability to:

(a) gain initial employment;

(b) maintain employment and make 'transitions' between jobs and roles within the same organisation to meet new job requirements; and

(c) obtain new employment if required, to be independent in the labour market by being willing and able to manage employment transitions between and within organisations.

The concept of employability as defined by Hillage and Pollard dispels the traditional practice of days gone by when one's job is for life. An ability to move in and out of jobs, within and outside organisations, in an age of technological advancement and innovation implies the need for life-long learning. Also, the concept defined is not about an individual's status by being employed but more as the level of competencies a graduate possesses (Shukran and Munir 2011).

3.2 Job/Skill Match and Mismatch

The underpinning theory that governs the theoretical framework of this report is that of job/skill matching. With increasing concern about Malaysian youth employment, especially that of new graduates, focus has been on HEIs to develop in undergraduate programmes work, employability and transferable skills that have broad applicability in the workforce. The successful inculcation and acquisition of these skills like problem-solving, spoken and written communication, especially in the English language, computer literacy, advanced information technology or software skills, creativity and the ability to work independently or in teams, would contribute to the superior labour market outcomes for graduates in possession of these very skills.

A good job match takes place when the competency level (qualification) and specialisation (field of study) required by employers are equivalent to those of the graduates offered employment. Job match can also be identified by the extent to which graduates are able to utilise the knowledge, skills and attitudes in the context of the workplace (Barnard *et al.* 2001).

In matching theory, unemployment or under utilisation of graduate-level knowledge and skills in employment reflects mismatches between employers and graduates. According to Cappelli (2015), a mismatch occurs when the demand for and supply of skills fail to align or are in sync in either direction, resulting thus to over supply or under supply. Two types of over-education mismatch have been identified, these being vertical job mismatch and horizontal job mismatch. When individuals invest in post-school qualifications at a level substantially higher than what is required at the work-place, vertical job mismatch takes place. In a situation when certain fields of education like business administration and humanities are in surplus when the labour market is experiencing a shortage of science graduates, engineers and technocrats, horizontal job mismatch has occurred. According to the job matching theory, a mismatch between the required competency level, field of specialisation and skills of employers, and those that graduates actually possess has serious consequences for labour productivity, wages and even the likelihood of securing jobs.

Although the idea of job/skill mismatch is associated with the failure of the entire education system, from pre-school to tertiary level, to impart the required skills and attributes to graduates, some other causes of the imbalance in the supply and demand labour framework should be considered. The skill shortage and mismatch can be the result of both government and market failures such as weak policy-implementation process, inappropriate institutional arrangement, imperfect market competition for worker's skills and lack of information for both workers and firms (Ramos 2016). There is also the issue of graduates themselves who are unemployed due to unrealistic expectation of starting salaries at work and a lack of some work experience itself.

3.3 Selected Studies for Review

(i) *University education and employment in Malaysia* is a seminal study undertaken jointly by the International Institute for Educational Planning (IIEP) and the University of Malaya (UM) from 1982 to 1983. The research report (IIEP Research Report No. 66) was published in 1987 and editors were Ungku A.Aziz, Chew Sing Buan and Lee Kiong Hock (UM) and Bikas C.Sanyal (IIEP).

It should be pointed out that the aim of the study was not to measure the relationship between university education and the labour market precisely. The main objectives were to obtain

information in respect of (a) the discrepancies in the responsiveness of the universities to the labour market needs (b) the variance in the distribution of university education and employment opportunities, and (c) the differences in aspiration among students, graduates and employers in terms of the performance of the universities and the operations of the labour market.

This study is significant for several reasons. First, there is the sizeable sample of respondents representing different groups of stakeholders in university education and the workplace. Second, it is the impact of the economic slowdown on the labour force and employment, following a period of impressive economic growth in the 1970s. Third is the perceptions of the stakeholders regarding university education, transition from university education to work and the world of work. Many of these perceptions are shared by educational stakeholders today. Fourth, the recommendations made are not only connected with issues relating to the education system and the labour force model but also show how these are to be undertaken. A good number of recommendations made has been adopted by the government and universities though the gestation period prior to their adoption has been considerable.

(a) Sample size of the study

The data, collected by four teams of researchers, represents four different groups of stakeholders in university education and the workplace. Of the sizeable sample, there were 1,865 Upper Sixth Form students, 2,429 final-year undergraduates, 1,933 graduate employees and 76 employers from the public and private sectors.

(b) Impact of the economic slow-down on labour force and employment

Following a period of impressive economic growth in the 1970s, the immediate future seemed clouded. The rate of job creation slowed. More people were joining the labour force between 1980 and 1985 than what the economy could generate in terms of new jobs for the same period of time. As a result, the unemployment rate increased from 5.7% in 1980 to 7.6% in 1985.

An increasing proportion of unemployed between 1982 and 1983 had formal education with incidence of unemployment highest among those with secondary education. Graduate unemployment increased with generalist graduates accounting for over 64% of the registered unemployed graduates. Also, a large proportion of the graduates was first-time job seekers. The tightening of the labour market was evidenced by a longer waiting period and 25% of the graduates waited for a year or more before being employed.

In spite of a high rate of unemployed graduates, skill-specific shortages occurred in the labour market, especially in the manufacturing sector. The public sector experienced manpower shortages in law, medicine, veterinary science and engineering due partly to the relatively lower number of student admission to the sciences compared to the arts.

The above scenario mirrors very much the issues faced by the labour market and universities today. There is rising concern with youth unemployment, especially among new graduates. Universities are not producing graduates in the specialised disciplines like the sciences, engineering, and technical and vocational education and training that the labour market requires.

(c) *Perceptions regarding university education*

Some of the interesting and relevant perceptions of the four groups of stakeholders are summarised below.

- The most important reason for pursuing university education in regard to sixth form students and undergraduates were to achieve better employment prospects and obtain professional qualifications.

- One out of every four science student in sixth form indicated that they intended to switch over to arts, economics, public administration and social sciences when they enter universities.

- Four-fifths of undergraduates felt that university education was too examination oriented and even one-fifth of them occasionally regretted for being in the universities themselves.

- As for graduate employees, 88% found courses undertaken were either ‘very useful’ or ‘useful’ to job performance. Only 12% responded with ‘not useful’. Meanwhile, existing trend analysis, at that point of time, suggests that the proportion of graduates who perceived courses as not being useful to job performance would be increased.

- About a quarter of the undergraduates responded that courses taken would not be useful to their foreseeable jobs.

- Graduate employees expressed the opinion that education mobility in universities were very limited. Opportunities to rectify a wrong choice of field of study, especially for the arts-based students, were few to begin with. Reasons for a change in course of study were for better career

opportunities or more in line with their interests and aptitude. One-fifth of the student would change from their course study if given the opportunity to do so.

- To employers, the most important role of universities was to develop an individual's ability to think rationally and systematically. This role was followed by sensitivity to and awareness of community problems and needs, imparting a general education and focusing on specific vocational skills. Few of the employers considered extra-curricular activities to be important.

- Also, employers were willing to cooperate with universities to meet manpower needs. The most popular mode of cooperation was vacation employment for students (internships), followed by financial support via scholarships and loans.

(d) Transition from university education to work

- Of the study sample, over 80% of sixth-form students and over 60% of undergraduates would work in the government and quasi-government sectors. Only about 11% and 19% of sixth-form students and undergraduates opted for work in the private sectors respectively. A mere 3% of sixth-form students and 4% of undergraduates chose to be self-employed.

- A very large proportion of the graduate employees was actually employed in government and quasi-government sectors.

- Graduates from overseas universities tend to seek employment in the private sector.

- Academic records were considered to be the most important criterion in getting a job by sixth-form students, undergraduates, graduate employees and employers in the public sector. Apart from academic records, graduate employees found interviews, aptitude tests and past experiences in a similar kind of job to be important criteria for employment. In fact, graduate employees and sixth-form students preferred to gain work experience (internships) while studying.

- In contrast, greater emphasis on affective characteristics and practical experience was given by employers in the private sector.

- A majority of the undergraduates was confident in getting a job consistent with their own qualifications . Three-quarters of them were confident of getting a job within three months of graduation. Graduate employees felt that professional degrees facilitated employment more readily than non-professional qualifications.

(e) World of work

- Job satisfaction was experienced when interesting work and a good income were provided. Other considerations providing job satisfaction were work arrangements which offered opportunities for use of personal talents, improved one's competence and focused on work with people.

- Starting salaries envisioned was realistic and almost 90% of the graduate employees actually earned above the salary over RM1,100 monthly.

- On an average, graduates in the private sector and with professional qualifications earned more than those in the public sector.

- About a third of the graduate employees had changed jobs during their working career for better pay and condition of service, promotion prospects and jobs more in line with their talents.

- There was some degree of mismatch between the occupation of graduates and their fields of studies although this was minimal for those with professional qualifications.

(f) Recommendations

The recommendations made and extent of them being adopted by the various stakeholders are summarised below.

(a) There was a need to establish a co-ordinating agency to have an overall control and responsibility for planning and co-ordination. It would be supported by main agencies charged with sectoral responsibilities in the public, private and, education and training sectors. The Human Resources Centre of the Economic Planning Unit in the Prime Minister's Department seemed well-placed for the overall role.

Adopted: Presently, the Economic Planning Unit (EPU) is the principal government agency responsible for the preparation of development plans for the country. Supporting the EPU are major ministries like the Ministry of Human Resources, Public Service Department, and the Ministry of Education and the Ministry of Higher Education.

(b) Education and training authorities are to place less emphasis on manpower projections and more on manpower analysis of the operations of the labour market. ETAS need to know how their graduates fare in the labour market as more of them turn to the private sector for employment. Private sector demand is not only different from that of the public sector, then and even now the main employer of graduates, but also less predictable. There is a need for an on-going process of manpower analysis to generate the necessary information for planning purposes. Tracer studies were suggested as a way forward to gauge how graduates were doing in the workforce.

Adopted: Recourse has been made to use manpower analysis besides manpower projections for planning purposes. Following the introduction of the SETARA ranking exercise for public and private universities, and private university colleges by the Ministry of Higher Education in 2009, tracer studies of graduates have been issued on an annual basis, including ' Quick Facts' online by the Education, Planning and Research Division of the Ministry of Education.

(c) Given that the public sector has a propensity to set wage scales uniformly across fields of specialisation, there is very little incentives to pursue an engineering or technical career in the public service. Potential graduates become more inclined towards the 'less demanding' but financially equally rewarding courses. An increase in relative wages for scientific and technical occupations was suggested. Besides wages, other forms of incentives like opportunities for career advancement, security of employment and conditions of service are equally important.

Adopted: In the Eleventh Malaysia Plan, TVET, the game changer, is to be transformed to meet industry demands for skilled workers. TVET is to be re-branded to increase its attractions and technologists are to be recognised as professionals. For this purpose, the Malaysia Board of Technologists (MBOT) is to be established as a statutory body to regulate, promote and develop the technologist profession in Malaysia. The wages of TVET graduates are to be improved with a monthly median wage from RM1,575 in 2014 to RM2,500 in 2020.

(d) To overcome the probability of keeping qualified students from poor families out of university by increasing the private costs of university education, a student loan scheme would be introduced to improve students' access to financial credit.

Adopted: In 1997, the National Higher Education Fund (PTPTN) loan scheme was established by the government. The aim is to provide education loans to Malaysian students pursuing their studies in local HEIs. This loan enables students to pay partially or fully their fees and their subsistence for

the duration of their study. Since 1997, PTPTN had disbursed loans to 1.95 million students, totalling more than RM43.6 billion by 2014. (Study Malaysia.com 2014).

(e) An important source of labour market information is via increased interaction between university, and the private and public sector establishments Vacation employment also provides information on the future demand for graduates by field of specialisation. Other forms of co-operation are in the area of university curricular and an open certification scheme to provide more opportunities for those with work experience to further their education in the local universities.

Adopted: Collaboration between universities and industries has intensified via appointments and activities. One of the criteria for SETARA scores is the appointment of industrial advisors to universities and university colleges, the purpose being collaborative outcomes in curriculum development and career guidance. While industrialists are appointed as adjunct lecturers to share their experiences with undergraduates, academic staff are posted to firms and corporations to experience the real world of work.

The Accredited Prior Experiential Learning (APEL) was introduced by the MQA of MOHE in 2011. This provides an avenue for experienced workers to pursue further education in local HEIs.

This seminal study concludes with important lessons for universities and employers. It perceives that the ultimate goal of tertiary education is to produce graduates who can fit in easily and quickly in the workplace, and adapt to changing technology and environment so that labour productivity is increased to keep pace, if not overtake, its neighbouring competitors in the region. As for employers, the provision of job satisfaction contributes towards high labour productivity. Sixth-form students, undergraduates and graduates have indicated that they find job satisfaction in interesting work which taps on their talents, job security and good career prospects.

(ii) The National Higher Education Research Institute conducted a major study on graduate unemployment in 2002/2003. In contrast to the contextual backdrop of the previous study reviewed, this was a period that followed the Asian Financial Crisis of 1997 which had a devastating impact on the Malaysian economy. It is in the context of a continuous supply of graduates against a backdrop of changing economic status and employment structures that issues concerning graduate unemployment and graduate employability have been raised on a serious note of rising concerns.

Based on the findings of the study, a series of monographs was published. The review relates to two of the monographs, one on academic achievement and graduate employability (Morshidi Sirat 2004) and the other on university curriculum and employability needs (Ambigapathy Pandian 2010).

In relation to academic achievement, results of the study showed that graduates with a high probability of being employed were those in possession of (a) a high level of English language competency, especially for employment in the private sector, and (b) 'A' level or matriculation qualification more than the STPM (Malaysia Higher School Certificate) for university admission. As for value-added, the study found a high likelihood of being employed for the Chinese more than the Malay graduates, and engineering students than those in the arts, business, economics and law courses. The study advocated for not only science and mathematics to be taught in English but also the arts and social sciences; the promotion and enhancement of secondary technical and vocational education; and the inculcation of communication and thinking skills. It was also suggested for universities to formulate policies to help students at risk.

(iii) The sample in Ambigapathy's study on the university curriculum and employment needs consisted of academicians, graduates and employers. Their responses to the interviews are indicated below.

Perception of academicians

- The university is responsible in ensuring the employability of graduates. However, this responsibility is collective in practice as society is involved as well.

- Duration of university studies has to be reviewed from the present three-years' system. The number of graduates is increasing at too fast a rate and, thereby, putting a strain on the industries' capacity to absorb them all at the workplace.

- The role of the university is to impart knowledge and graduate employability is a collective responsibility on the part of the government, industry and society.

- Foreign university graduates are not necessarily better in quality than those from the local universities.

- Quality of the curriculum has to be maintained.

- University curriculum has to have a balance between higher-level and soft skills. Graduates have been exposed to soft skills like reading, writing and creative and critical thinking strategies. This sufficient preparation in basic skills and knowledge acquired will enable graduates to 'function' in the real world.

- There are constraints in curriculum review to adapt it to industry needs. The procedures involved are time consuming. Also, the structure of the curriculum entails a specific number of credit hours in knowledge development. This requirement will affect the time available for the teaching and learning of skills and competencies related to employability.

- Use English as a medium of instruction. English is important in one's field of study and is the workplace literacy. The ability of science and ICT lecturers to teach in English is important as they can be role models in exposing students to the current workplace practices.

Industry's Perception of the University Curriculum

The traditional thinking of the university as a storehouse of knowledge must be changed. Together with the industry, the university can create an effective relationship in facing employment challenges.

- Periodical review of university curriculum is vital. The present curriculum needs to be changed to meet the requirements of workplaces. Academic staff should know the skills required by industries.

- Industry players are aware that curriculum changes are time consuming and involves a long process. Thus, industry prefers to co-operate with private colleges and universities as they are willing to change the curriculum according to the needs of industry. Furthermore, there are differences in perception between the roles of industry and the university.

- Insufficient consideration is given to practical training in university curriculum. Though the curriculum includes the teaching and learning of higher-level skills, its weakness is the lack of practical activities and the application of knowledge. Universities should place graduates in industry and provide stringent supervision to maximise internship practices.

- It is recognised that schools have a role to play in meeting the requirements of universities as well as workplace needs. The responsibility to enhance graduate employability becomes more challenging if it rests solely on the shoulders of universities.

Graduates' Perception of Skills and Competencies for Employment

- Given a poor command of the English language, graduates have been unsuccessful in securing any job opportunities.

- There is a lack of effective communication skills. Employers emphasise interpersonal and interactive skills. These two skills are very closely related to the ability to speak the English language and level of self-confidence.

- Inventive thinking skills are low. There does not seem to have any skills to deal with an array of job situations and tasks effectively.

- The requirement of high-productivity skills is important. Employers are willing to employ graduates with experience and those who have industrial training.

- University curriculum places less emphasis on soft skills. At interviews, graduates realise that industry takes into consideration the relevance of courses taken and the jobs that they are applying for. Sometimes, there is a mismatch between the contents of courses taken and the expectation of industry based on the degrees awarded.

- Industrial training is either optional or compulsory. The discrepancy between industry and programmes undertaken contributes to deficiencies in technologies and information literacy, and effective communication skills.

- Graduates have limited exposure to English in public HEIs as the medium of instruction is Bahasa Malaysia.

There seems to be a recognition on the past of academicians and employers that responsibility for graduate employability is to be taken seriously by all concerned - the government, industry players, educational personnel from pre-school to tertiary education, parents, students and non-government agencies. Thus, employers are willing to work with universities though they feel that their roles in graduate employment and employability are not always understood by university management and academicians. Industry participation, when carried out effectively and efficiently, is likely to be of value-added for the work experience and job skills of graduates, and so too an university curriculum that focuses not only on theoretical aspects but also on practices and the application of knowledge.

All the respondents agree that English language competencies and digital literacy are vital in an era of rapid technological advancement that impacts on the teaching and learning process itself. Competency in any language is best started not at the university level but at the beginning of the education system, namely, in pre-schools. This is evident from the case of Bahasa Malaysia which was made mandatory in Standard 1 at the primary level in 1970. Over 13 years of primary, secondary and post-secondary schooling, the classes of 1970 have achieved proficiency in Bahasa Malaysia by 1983.

(iv) In the study on *Employability of Graduates in Malaysia* (Morshidi Sirat 2012), the respondents were recent graduates, including the unemployed, academicians, industry employers, government agencies and non-government organisations (NGOs). A qualitative approach was adopted via focus-group interviews with respondents in Kuala Lumpur and Penang between July and September 2009 to enhance graduate employment and employability. Their responses are summarised below.

Unemployment was due to changes in sectorial and occupational structures as a result of the economic slow down. The surge in the number of university graduates for entry into labour market accentuated the unemployment scenario. The Director of the Federation of Malaysian Employers expressed that jobs were available in the expanding service sector but the major issue was the unsuitability of graduates, an opinion shared by a majority of the respondents, including the unemployed. The unemployed graduates responded that they failed to satisfy the job requirements in terms of their academic qualifications, skills and competencies. They lacked work experience and some were reluctant to move away from home to Kuala Lumpur or Penang where jobs were available due to the high cost of living in the cities.

Characteristics of employability as highlighted by the employers were personality attributes and academic qualification. Qualification was an important requirement but not considered as important as attitudes. Therefore, 'we look just at their qualification (technical) but this will make up 20% and the rest depends on their attitude and adaptability'. A high grade-point average (GPA) will not guarantee employment. Employees, academicians, and NGOs saw the need for graduates who are balanced in terms of intelligence, and emotional and spiritual quotients.

*Good-quality gradu*ates are defined as those with good values (honest, confident yet humble, innovative and creative), positive attitudes (proactive, hardworking, high motivation, and curiosity driven), work-related skills (communication, entrepreneurship and leadership), and preparedness to work (industry-led skills and ability to perform well in a working environment).

How employees are to gain the required work skills received a consensus view among academicians and employers. Academicians recognised the value of on-the-job training and networking with industries to expose students to the real world of work. Alumni should lend a helping hand by providing work opportunities for students. However, academicians emphasised that it was insufficient to focus on work skills alone. Graduates also need to develop knowledge and values in order to contribute effectively to society.

Employers considered work experience as necessary. However, they were not satisfied with the level of networking between industries and universities. It was felt necessary for employers to be invited more often to give career advice and talks. Furthermore, employers should play an active role in assisting curriculum development to ensure that contents match job-market needs.

Graduates were vocal in their opinion for lecturers to up-date their information on the changes and requirements in the real world of work. They indicated that some lecturers taught only theory and neglected practices and hands-on experiences. For example, lecturers need to emphasise the practical aspects of entrepreneurship courses. Teaching entrepreneurship theory would not be very useful in preparing students for the workplace.

Can social and interpersonal skills be taught was answered with 'could not' by both employers and academicians. Employers expressed the opinion that universities could organise activities to transfer these skills to graduates but it would be difficult to teach them. Academicians agreed that extra-curricular programmes could help students to improve their social and interpersonal skills. These soft skills could not be taught easily at the university level.

Should HEIs' curricula be re-structured was responded positively by the employed and unemployed graduates. There was a need to realign university curricula, and the teaching and learning process to meet the requirements of workplaces. Employers should play a significant role in assisting academicians to restructure courses in line with the skills required for employment.

Employers considered internships with well-know companies to be of value provided they are for a period of more than three months. Some employers, however, expressed some reservation about internships as they were operating tight work-schedules and limited manpower could not be spared to manage interns.

Graduates regarded internship as useful for securing jobs. They suggested that internships be scheduled in the final semester to provide them with some necessary experience in securing jobs. However, some of the trainee graduates found internships to be useful but they did not gain much experience as employers did not trust them fully.

NGOs suggested that both graduates and lecturers be exposed to civil society activities during semester breaks. They would see life outside the 'ivory towers' and familiarise themselves with NGO-type of projects.

Constraints in producing employable graduates were highlighted by employers. The issue was traced to a curriculum that did not fit the needs of a workplace. Universities lacked information on labour-market requirements. Hence, there was an over-supply of graduates in information technology at a time when there was insufficient a number of large IT companies to absorb them. Graduates themselves were rather uniformed about the need to establish and follow a career path. Although a good number of graduates displayed half-hearted attitudes towards work, yet they expected to be paid high salaries without the due process of gaining experience over time. The latter observation was reinforced by some of the responses from graduates in the study.

Overall, the industry and NGOs raised the issues of tight budgets, limited human resources and time constraints in enhancing the employability of graduates. Their preference was industry-ready and experienced graduates as new entries to the labour market. This response would place a great burden and responsibility on HEIs in producing graduates to meet industry needs for economic purposes and, at the same time, prepare students for effective participation in the civil society.

The findings highlight the fact that an academic degree is no longer a guarantee for employment. As universities produce a continuous flow of graduates, degrees constitute a common denominator among them. Hence, the distinguishing features are hard and soft skills, and personality attributes appropriate for the work-place.

Though these seems to be good intent to collaborate with one another, there appears to be an element of 'mistrust' between universities and industries, and even between employers and internees. Though the MOHE has prescribed a list of attributes to be included in the university curriculum, academic staff and employers consider their teaching to be a difficult task to carry out effectively.

The research team has, in fact, introduced the concept of 'graduatedness' as against 'employability', given the contention that university education is to teach competencies beyond the skills needed for the workplace. The role of the university is not only to prepare graduates for employment but also, more important, to contribute to a fair and just society.

This contention raises the question of whether HEIs should focus on the development of the individual to meet the needs of society or concentrate on the needs of employers. Winterton and Haworth (2013) regard the views at both extremes as untenable and emphasise the need to strike a balance between them.

(v) With the understanding that the labour market has placed skills and attributes as its top priority for employment, subsequent research has focused on the extent that universities are able to teach these elements of the curriculum (Pramjit Singh 2013, Zaliza Hanapi and Mohd. Safarin 2014, and Ang 2015). Parmjit's aim was to identify areas of consonance or dissonance in the perceptions of instructors and employers in the Klang Valley. There was some degree of consonance on general skills such as communication skills, integrity and professional ethics, and teamwork. Critical thinking and problem-solving, highly regarded in the educational areas, was not perceived to be important by employers. The ranking of attributes is rather subjective, and cultural and context dependent as well. In the study by Zaliza, employers decry the poor technical and employable skills of graduates while lecturers emphasise the need for intensive training to enhance the quality of the teaching and learning process in respect of skill competence. Significant gaps in critical skills between graduates and employers were also reported in the study by Ang.

Yoshiko Koda and Takako Yuki (2013) used the responses of 356 respondents to ascertain if there was any difference between two forms of cross-border higher education degree programmes - the traditional study abroad versus twinning - in regards to three aspects of the labour market, namely, early employment, and current positions and earnings. It was the Look East Policy Programme conducted by Malaysia and Japan. The findings suggest that there was no significant difference in labour market outcomes between the two programmes. However, the field of study, internship and university ranking were significant for the first appointment within a month following graduation. For current work, inclusive of status and salary, postgraduate qualifications, experience and language competencies in English and Japanese were important considerations. Language proficiency and professional qualification are likely to result in higher wage premiums.

It seems appropriate to end the review with the study by Yoong *et al.* (2017) which reinforces the perceptions that graduate employment and employability does not rests on universities alone. The study presents a critique of the *National Graduate Employability Blueprint 2012-2017* of the government which expects HEIs to give priority to the needs of industry and take full responsibility for preparing students to meet the demands of the workplace. In the process of highlighting the roles of HEIs, employers and industry players, and graduates, the blueprint neglects the importance of the influence of the family, school teachers and related ministries on graduate employability.

Overall, the studies reviewed are overwhelmingly about graduates of academic education. The sample of these studies consisted mainly of employers, undergraduates and graduates, less of academic staff and none at all of senior management in HEIs. Most of the recommendations made were prescriptive in orientation and without much consideration of how they were to be undertaken. However, the exceptions worthy of note are those of the seminal study of IIEP and the major works of research teams in the National Higher Education Research Institute.

4.0 METHODOLOGY

Phase III, like the earlier Phases I and II, used the mixed model approach for both data collection and analysis. The mixed approach permits combining both quantitative and qualitative aspects of research. This approach for data collection used a structured questionnaire administered online to academic staff and senior management of private and public HEIs, and focus group discussions/interviews involving senior management from selected HEIs and policy makers. Table 4.1 provides the breakdown of respondents in Phase III

4.1 Senior Management Survey

Appendix 1.0 shows the Senior Management Survey Instrument which is divided into six sections. Section A seeks background data on respondent information such as name and type of institution, position held, years of experience in the education sector as well as in industry. The Section also contains 15 statements/factors that influenced students to join the respondent's institution and a question on whether the institution has any TNE collaboration. Section B solicits information specific to the reasons why the respondent's institution choose to implement TNE programmes (if they had answered in the positive in section A). It contains 13 statements. Section C contains three questions on graduate employment and employability. Section D asked the respondents on the

attributes and skills that are important for graduates to gain employment. The last section elicits general comments the respondents may have.

As indicated in Table 4.1, there were 28 Senior Management respondents, three of whom were from the public sector. This is not a surprising find as TNE in Malaysia is largely placed in the private higher education sector. There was a higher proportion of respondents from the universities as opposed to university colleges and colleges.

Table 4.1: Respondents of Survey and Interviews in Selected Higher Education Institutions

Higher Education Institutions	Senior Management	Academic Staff	Interviews
Universities	15	121	15
	(53.6)	(91.7)	(75.0)
University Colleges	4	2	0
	(14.3)	(1.5)	(0.0)
Colleges	9	9	2
	(32.1)	(6.8)	(10.0)
Policy Makers	-	-	3
			(15.0)
Total	28[1] (100.0)	146[2] (100.0)	20[3] (100.0)

[1] Public Universities (3), Private Higher Education Institutions (25)
[2] Public Universities (18), Private Higher Education Institutions (114)
[3] Private Higher Education Institutions (17), Policy Makers (3)

4.2 Academic Staff Survey

This study also included an Academic Staff Survey as indicated in Table 4.1. Of the 146 responses, only 18 were from public universities. Again, the reason for this is that TNE thrives in the private higher education sector in Malaysia. The survey instrument for academic staff is shown in Appendix 2. Similar to the instrument for senior management, there are five sections. Section A is on background information such as name and type of institution, position held, years of experience

in the education sector as well as in industry. It also contains 15 statements on factors that influence students to join the respondents' institutions and if they have had any TNE collaboration. Section B solicits information specific to the reason why the respondent's institution choose to implement TNE programmes (if they had answered in the positive in section A). It contains 13 statements. Section C contains three questions on graduate employment and employability. Section D asked the respondents on the attributes and skills that are important for graduates to gain employment. Section E elicits general comments the respondents may have in this area.

4.3 Focus Group Discussion/Interviews

In addition to the above on-line surveys, seven focus group interviews were conducted with selected senior management, academic staff and policy makers involving a total of 20 respondents. The focus group discussion was carried out between December 2017 and March 2018, five of which were with private higher education institutions whilst two were with policy makers. These were structured discussions guided by a set of questions and the instruments are attached in Appendix 3 (senior management), Appendix 4 (academic staff) and Appendix 5 (policy makers). Similar questions were asked to enable internal triangulation and validity of the study. Definitions, perceptions and comments on the general status of graduate employment and employability were sought from the respondents. The findings are discussed, in detail, in Sections 5, 6 and 7 of this report.

4.4 The Mixed Research Paradigm

The choice of research paradigm – quantitative or qualitative – is a subjective exercise. Whether to make the choice is in itself a choice. For this study, we believe this choice is unnecessary. As indicated by Krauss (2005:759), despite the major paradigms' epistemological differences, 'ultimately, the heart of the quantitative-qualitative 'debate' is philosophical, not methodological'. It is therefore appropriate to view these paradigms not as competitive but complementary (Onwuegbuzie and Leech 2005). The philosophical paradigm that does this is realism (Healy and Perry 2000) within which framework both quantitative and qualitative methodologies have a place, depending on the circumstances. The hallmark, then, of this paradigm is pragmatism. Also, the objective of the researcher adopting realism is to combine the strengths of quantitative and qualitative paradigms − the so-called Fundamental Principle of Mixed Research.

For this paradigm, the mixed model approach for data collection is used. A structured questionnaire administered to respondents from selected public and private HEIs is combined with in-depth

interviews with key informants (Yin 2009). The use of multiple methods increases both the breadth and depth of data collection. The selection of key informants is undertaken, purposively, in the spirit of Luborsky and Rubinstein's (1995:6) 'sampling for meaning', that is, informants are chosen who can add meaning to the research. In the interest of time, it was decided that data collection using both the above methods be undertaken simultaneously. This meant the merging of both sets of data into a larger data set for analysis.

The mixed research paradigm has several advantages which this research intends to exploit. First, data collection using probabilistic sampling ensures external validity, permitting generalization of findings. Second, the use of key informants should yield analytical insights not possible with structured questionnaires. Third, key informants also help to validate findings from the questionnaires, thereby enhancing the reliability of these findings. Fourth, the range of responses coming from informants with different backgrounds and from different types of HEIs also ensures the neutrality of findings.

4.5 Operationalizing the Research: Sampling and Data Collection

Although the data obtained is cross-sectional, the study is both embedded and (potentially) longitudinal from a data perspective. It is embedded in the sense that although the unit of analysis is the higher education sector, information is sought from senior management, academic staff and policy makers. It is potentially longitudinal in the sense that the units of analysis considering employment and employability related activities are respondents who have spent a life time dedicated to the shaping of young minds and preparing students for the workplace under different circumstances. What is the importance of the time dimension? It lies in the fact that context needs to be taken into account in analysis.

4.6 Validation

Validation of the findings of this study is through triangulation. First, methods triangulation is used through deploying both online survey through a structured questionnaire and a series of face-to-face focus group discussions/interviews, the details of which have been described in the previous subsection. Second, other sources of information are used to validate the results from this study. These are (i) findings from the National Graduate Tracer Studies 2009 to 2015 (ii) national policies on enhancing graduate employment and employability, and (iii) Phases I and II reports. These other sources permit triangulation through secondary data as well as through respondents.

4.7 Issues in Implementation of Research Instruments and Limitations of Study

No efforts have been spared in formulating and piloting the survey instruments. The close scrutiny in the selection of a representative sample of senior management and academic staff and policy makers were also deployed. However, there were limitations faced in the course of implementing the research instruments, namely, online questionnaires and focus group discussions/interviews.

Respondents were largely constrained with time due to conflicting priorities. Given the numerous public holidays in Malaysia and the different semester breaks between public and private HEIs, finding a period to optimise responses is a difficult task indeed. There is a broad sense of survey fatigue among many respondents. Furthermore, there was also the usual reluctance in the filling in of questionnaires, be they online or paper-based. The requirement to attend focus-group interviews posed yet another challenge, as either institutions were reluctant to support research activities or the timing of the focus groups themselves.

Due to the reasons listed above, a problem encountered in this study relates to the representativeness of the sample. The survey method used in the study suffered from the inherent weaknesses of such a research tool as in using such a method, the individuality of the units of observation was lost. Data collected on perceptions by means of questionnaires need to be interpreted with some caution. A sophisticated analysis based on imprecise information would be meaningless. For this reason, relatively simple measures like percentages and averages were used to describe the data. Focus group discussion/interviews, while being a popular instrument for the collection of qualitative data, has its own inherent weaknesses. Largely, the varying importance placed by different individuals, almost all discussing a topic at the same time, can be overwhelming to some respondents. To overcome this and to elicit the best discussion, most of the focus groups were small in number and very focused in intent.

5.0 PERCEPTIONS OF SENIOR MANAGEMENT

5.1 Profile of Senior Management Respondents

As indicated in Section 4, data collection was based on an online questionnaire and focus-group discussion conducted with a selection of senior management and academic staff in public and private universities, and policy makers. In relation to the profile of senior management, aspects

covered are type of institutions, status, highest level of education attained and place where qualifications was obtained, and years worked in the education and non-education sectors.

Table 5.1 shows that a majority of the senior management was from the universities, was holding the position of vice-chancellors, deputy vice-chancellors or equivalent, and obtained their doctoral qualification from overseas universities. While a large majority (about 80%) had worked in the education sector for more than 10 years, only 30% had work experience in the non-education sector for the same period of time.

5.2 Perceptions and Interpretation

The perception of senior management on graduate employment and employability is measured via six dimensions expressed in statements in the online questionnaire. Their perception is gauged through identifying the factors that influence students' enrolment in their institutions. Senior management was asked to identify the reasons for TNE if it was provided as part of their programmes on offer. They were also required to indicate the employment opportunities in relation to the types of institutions awarding the qualifications. Furthermore, senior management was to indicate the extent of their satisfaction with respect to institutional provision in the enhancement of graduate employment and employability. The final two dimensions required senior management to assess how successful their efforts had been in producing holistic graduates and importance given to skills and personal attributes to meet the needs and interests of employers. Perceptions were interpreted by comparing views expressed as scales, and the extent of agreement or disagreement to statements given in the six dimensions indicated earlier on. Details of the questionnaire are given in Appendix 1.

Figure 5.1 shows the perceptions of senior management with regard to factors which influence students' choice of institutions to enrol in. The most important factors of influence, as measured by the percentage of respondents who expressed strong agreement and agreement, are (a) perceived standing of the institution ('well-regarded locally') and (b) employability ('qualification is valued by employers).

Two other factors of equal importance as in institutional prestige and employment opportunities are affordable tuition fees and impact of social media. There is a very broad range of tuition fees charged for university education between the public and private sectors. For example, the tuition fees for a first degree in economics is about RM24,000 in local public universities but is as high as

Table 5.1: Profile of Senior Management Respondents

Profile of Senior Management	Respondents	
	Number	Percentage
Type of Institutions		
University	15	53.6
College	9	32.1
University College	4	14.3
Sub-total	28	100.0
Status		
Vice-Chancellor (VC), Deputy VC or equivalent	15	53.6
Director and Head, Administrative Depts.	7	25.0
Dean, Head of Depts.	6	21.4
Sub-total	28	100.0
Highest Educational Level Attained		
Doctoral	15	53.6
Masters	8	28.5
Bachelors	1	3.6
Diploma	1	3.6
Others (Professional)	3	10.7
Sub-total	28	100.0
Place Where Highest Educational Qualification Was Obtained		
Overseas	14	50.0
Malaysia	11	39.3
Transnational	3	10.7
Sub-total	28	100.0

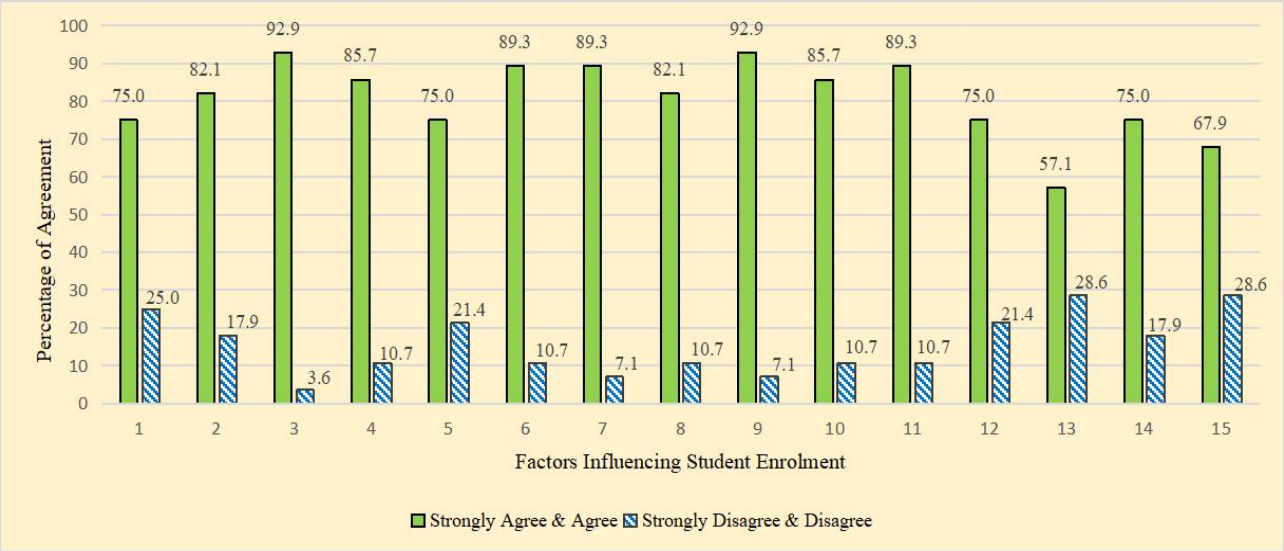
Table 5.1: Profile of Senior Management Respondents (Contd.)

Profile of Senior Management	Respondents	
	Number	Percentage
Years Worked in Education Sector		
More than 10 years	23	82.1
6 - 10 years	4	14.3
3 - 5 years	1	3.6
Sub-total	28	100.0
Years Worked in Non-Education Sector		
More than 10years	8	30.8
6 - 10 years	3	11.5
3 - 5 years	3	11.5
Below 2 years	7	26.9
None	5	19.3
Sub-total	28	100.0

RM90,000 in top local private universities. This significant variation of 275% is due to the fact that university education in local public universities is subsidised heavily to a proportion of over 90% by the government. In the private education sector, however, fees constitute their main source of income. Be it low private costs as in local public universities or high private costs as in local private universities, the costs or tuition fees factor does not appear to be a deterrent to the demand for university education. This is also the case with parents and students in Phase II of the study as affordable tuition fees is not rated particularly high as a reason for the selection of institutions enrolled in. The probability of high returns to university education in terms of modern sector high-income employment and social status may have prompted the perceptions of senior management in respect to 'affordable tuition fees' as a factor for student enrolment. This goes rather against the grain as about 89% of the senior management who responded was from the HEIs in the private sector. Yet, in 'Paying more to learn' (*Sunday Star* 15 January 2017, Focus, p.18), it is believed that most parents are willing to pay even if it means selling off their property and wiping

out their savings because private institutions are better managed financially, and they insist on meritocracy.

5.3 Factors Influencing Students' Enrolment in Institutions



1. Parents/family insist that he/she should do so
2. His/her friends are studying here
3. The institution is well-regarded locally
4. Campus environment
5. Alumni of the institution
6. The qualification is valued by employers
7. Graduates find it easy to get employment upon graduation
8. The institution is recognised internationally
9. Tuition fees charged is affordable
10. The institution has a good academic record
11. Social media
12. Education fairs or exhibitions
13. The programme provides international experience like study abroad schemes
14. Internship is part of the programme
15. Advertisements

Figure 5.1: Senior Management Perceptions of Factors Influencing Students to Enrol in Institutions

The reason for social media to be a positive 'X' factor in institutional enrolment by students is obvious. Social media, a popular communication platform for the 'Y' generation, has global reach,

same-time response when used, and an attractive and colourful format. Its usage incurs minimal costs relative to newspaper advertisements and education fairs.

There are two factors which are perceived negatively to have an influence on student enrolment in institutions by more than a quarter of the responses from senior management. These two factors are advertisements, its former 'pole position' overtaken by social media, and the provision of international experience like a study abroad scheme.

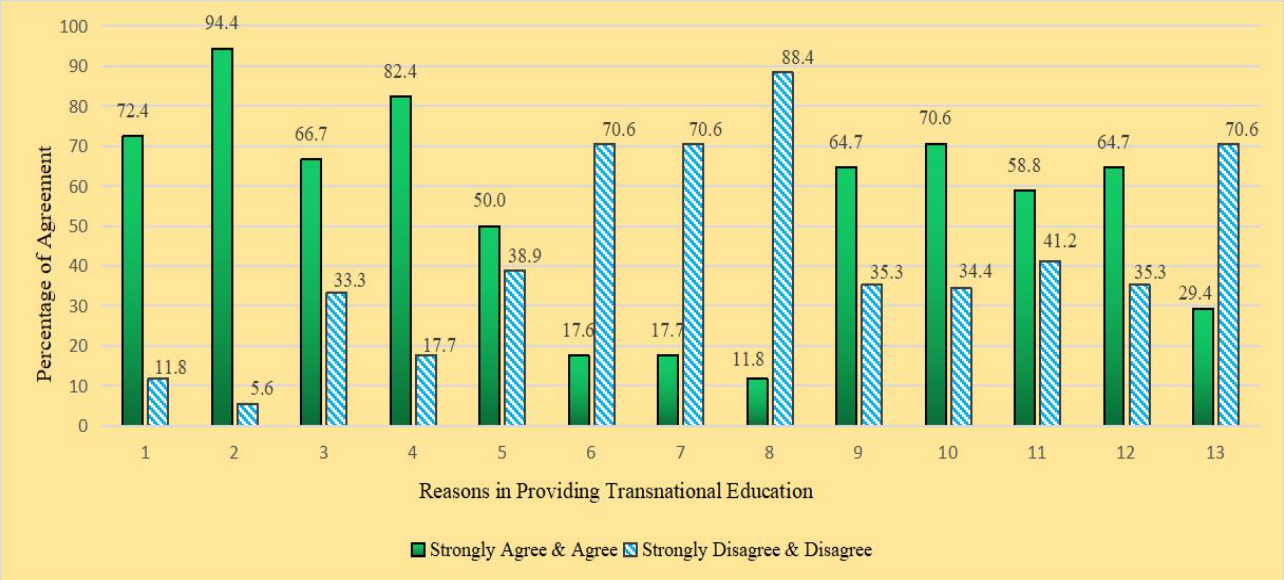
5.4 Reasons for Providing TNE Programmes

The senior management sample is dominated by those from the private HEIs, the proportion being 89.3% as compared to 10.7% from the public HEIs. Of the high number of senior management in the private HEIs, the proportion that offered TNE programmes was 64.3%. Even though students have a considerable number of choices which they can choose from private HEIs, only 11.8% of the senior management strongly agreed/agreed that the course enrolled in was offered only in a TNE mode as shown in Figure 5.2. Senior management recognises the fact that student preference is to participate in TNE programmes.

That senior management is aware and conscious of student and parental decisions made in programme selection is further supported by the reasons given for their provision of TNE programmes. Figure 5.2 shows that the most cited reasons is that it enhances internationalisation of curriculum (94.4%), employers place a premium on the ability of graduate employees who are proficient in English (82.4%), it costs less in tuition fees and other expenses than going abroad (72.4%) and it provides greater international exposure than a local home-grown qualification (70.6%).

While senior management and students/parents share the utility function of TNE programmes, as indicated above, there seems to be some shades of difference in emphasis as to what TNE can achieve. More than half of the student respondents in Phase II of this study expressed the opinion that it is easy to get a job upon graduation while 44.1% agreed that a TNE graduate will earn a higher salary than his/her counterpart with a local qualification. The sample of eight parents agreed with both the statements. In contrast, as high as 70.6% of the senior management disagreed strongly/disagreed that on graduation with a TNE qualification, jobs were easy to obtain with a salary higher than that of home-grown programmes. Their perception, being more objective and realistic than those of parents and students, went as far as to say that internationalisation of

curriculum and teaching staff are aspects of TNE programmes which can enhance employment opportunities and job prospects. Furthermore, slightly more than a third of the senior management strongly disagreed/disagreed that TNE meets the demand of the labour market for employable graduates and in relation to student capability for good academic performance.



1. Costs less than going abroad
2. Enhances internationalisation of curriculum
3. Enhances internationalisation of teaching staff
4. Employers place premium of graduates proficient in English
5. Originally, institution did not have granting-degree powers
6. Job is easier to get with TNE qualification than home-grown
7. TNE graduates earn a higher salary than home-grown qualifications
8. Programme offered only in TNE mode
9. TNE meets demand of labour market for employable graduates
10. Provides greater international exposure than home-grown qualifications
11. Demands of TNE programme are met adequately in relation to student capability for good academic performance
12. Extra-curricular activities are provided to develop students' competencies
13. TNE programme develops critical thinking much more than home-grown qualification

Figure 5.2: Reasons in Providing Transnational Education

What is of greater concern is that as high as 70.6% of the senior management strongly disagreed/disagreed that TNE programmes develop critical thinking much more than home-grown qualifications. In the Malaysian context, TNE programmes lead either to qualifications awarded solely by the oversea partners or to dual awards with two scrolls, one from the oversea partners and the other from the local HEIs. Whichever form the awards may take, TNE classes are taught mainly by local academicians who tend to teach for the purpose of enabling students to pass examinations and emphasise theory rather than practice and knowledge application. This has been commented upon by students in some of the studies reviewed, and in student and employer focus-group discussion in Phases I and II of the study on graduate employment and employabiltiy in Malaysia. Critical thinking and the ability to think outside the box are attributes that employers desire in the recruitment of graduates.

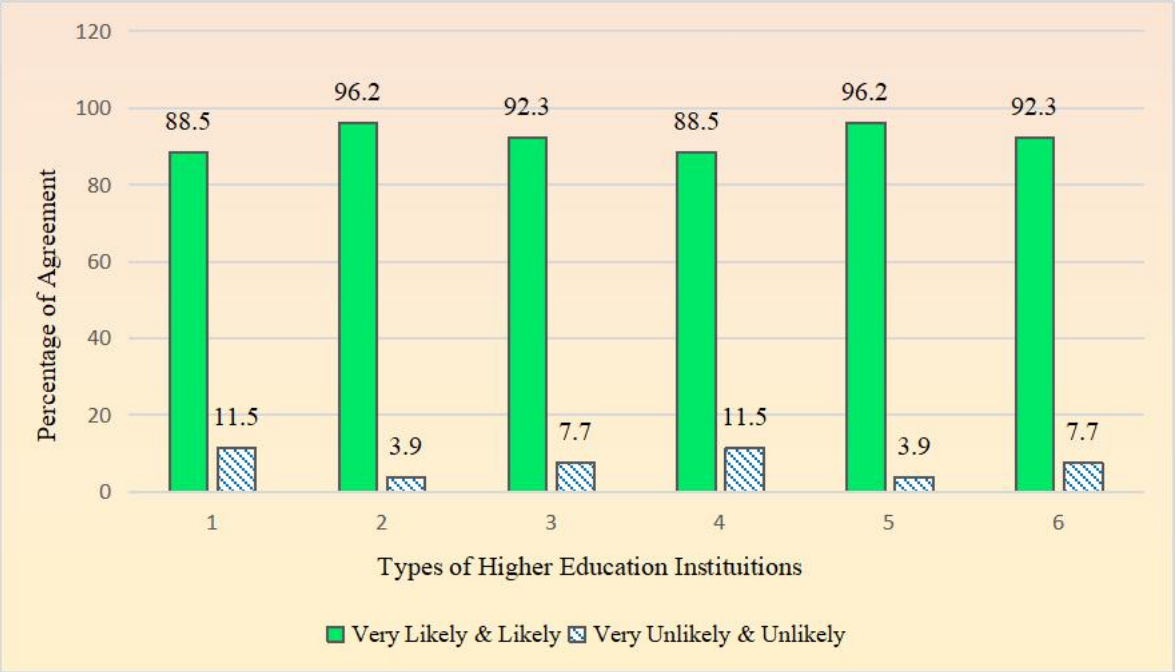
5.5 Likelihood of Employment by Types of Higher Education Institutions

Figure 5.3 provides the perceptions of senior management on the likelihood of employment from different types of HEIs. There is a clear indication that graduates from private HEIs are more likely to be employed than those from public universities. As high as 96.2% of the respondents considered that qualifications from international branch campus and local private universities would very likely/likely enhance employment opportunities. These were followed by foreign universities outside Malaysia and local private university colleges, each scoring with 92.3% of the respondents. Even local public universities and local private colleges were perceived by a creditable proportion of the senior management (88.5% each) to produce graduates whose employment opportunities are in the very likely/likely categories. Their unlikelihood of employment was perceived by about 11.5% of the respondents while that for local private universities and international branch campus was a more 3.9% each.

5.6 Degree of Satisfaction With Institutional Provision to Enhance Graduate Employment and Employability

Based on the very satisfied and satisfied responses of the senior management, their primary focus is on the role of HEIs in the effort to produce graduates as part of the human resource development agenda. Senior management was very highly satisfied with the academic role of HEIs. This is evident from the responses indicated in Figure 5.4 with the provision of qualified lecturers (92.3%) topping the list. This is followed by English as a medium of instruction (88.5%), up-to-date curriculum (84.6%) and feedback in student performance (84.6%). High satisfaction with these institutional provision is a realistic approach in fulfilling the needs and interests of their clientele,

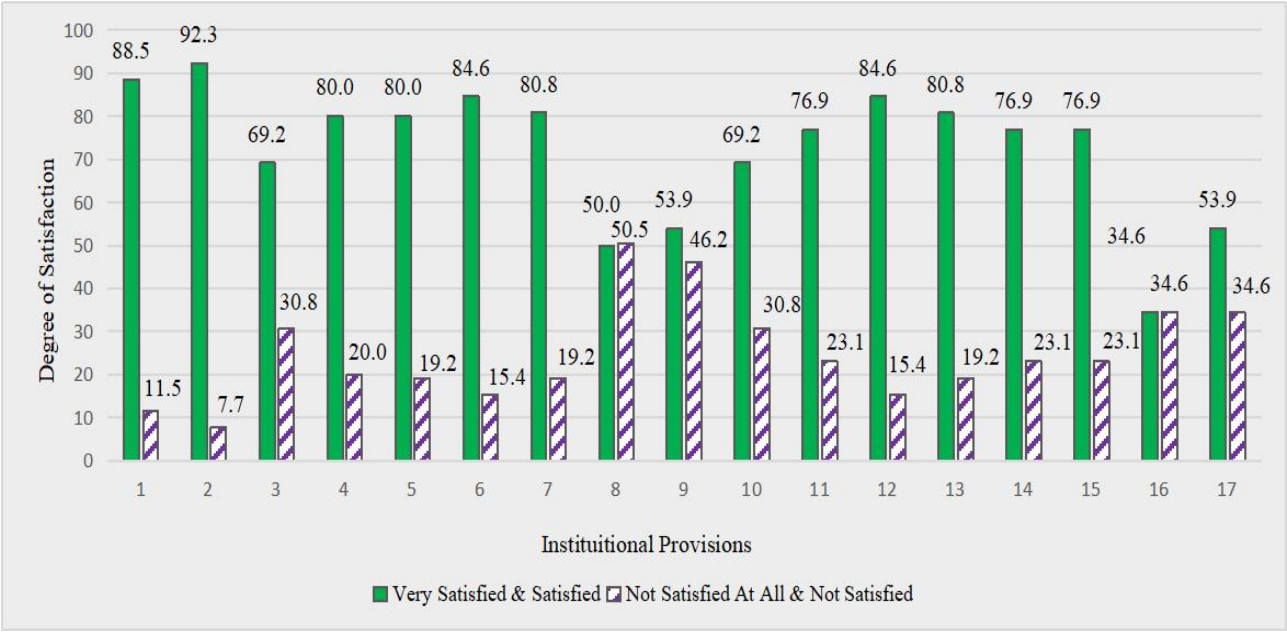
namely, students and their parents whose aim is to qualify for the degrees enrolled in. This is a first and realistic step in enhancing the employment opportunities of fresh graduates.



1. Local public universities
2. Local private universities
3. Local university colleges
4. Local private colleges
5. International branch campus
6. Foreign universities outside Malaysia

Figure 5.3: Likelihood of Employment by Types of Higher Education Institutions

Relatively less efforts are made by senior management to provide institutional provisions in enhancing graduates employment and employability. This is reflected in the extent of their very dissatisfied/dissatisfied response to statements like student's access to international employers during the degree course (50.5%) and student's access to employers during the degree course (30.8%), opportunities to link with alumni (46.2%), Bahasa Melayu as the medium of instruction (34.6%), support in the learning of language other than English and Bahasa Melayu (34.6%) and project or research work (30.8%).



1. English as a medium of instruction to enhance language competency
2. Qualified lecturers
3. Student's access to employers during the degree course
4. Availability of career advice
5. Experienced lecturers
6. Up-to-date curriculum
7. Course content which meets needs of industries
8. Student access to international employers during the degree course
9. Opportunities to link with alumni
10. Project or research work
11. Clear assessment criteria
12. Feedback in student performance
13. Industry advisors who ensure relevance of course curriculum
14. Curriculum vitae/resume writing support
15. Interview technique support
16. Bahasa Melayu as the medium of instruction
17. Support in the learning of languages other than English and Bahasa Melayu

Figure 5.4: Extent of Satisfaction Regarding Institutions Provision to Enhance Graduate Employment and Employability

Overall, the institutional canvas that can be sketched is one where senior management perceives relatively that sufficient efforts have been made to enhance graduate employment and employability.

A high proportion (about 80%) of the senior management has provided students with course content which meets the needs of industries, industry advisors who ensure relevance of course curriculum, availability of career advice, and support for curriculum vitae/resume writing and interview technique.

Yet, there are three other types of institutional provision that senior management can focus more on to enhance graduate employment and employabiltiy, these being greater access to local and foreign employers and alumni members, support for learning languages and project or research work.

Far too often, employers are invited only by HEIs during their career fairs. The frequency and types of interaction between students, academic staff and management can be increased as such collaboration provides opportunities to support each other in facing the realities of not only the operation of HEIs but also the real world of work. The high concentration of focus on the student population tends to result in the neglect of interaction with alumni members. The case of what the National University of Singapore (NUS) is engaged in to weave lifelong learning into higher education to prepare both students and alumni for future jobs provides an interesting diversion in reporting the findings of this study.

As reported in 'Student for life' (*Sunday Star*, Star Educate, 11 March 2018, p.9), the President of NUS states that:

> We are proposing that our graduates will be students for life. The aim is for NUS to be an 'anchor' for its community of graduates - nearly 300,000 of them - so that they can return to it throughout their lives for continual learning. That would have a tremendous impact on the whole campus. This concept of mixing adult learners with undergraduates is 'revolutionary'. Adult learners bring with them experience and maturity, and the adult learners can get a lot of enthusiasm and energy from younger undergraduates.

This initiative of NUS, introduced in August 2017, allows alumni to attend its classes for free and has proved to be popular, receiving more than 8,000 applications for 404 places in 79 undergraduate and postgraduate modules. In January 2018, NUS enrolled 1,200 students across 88 modules under this collaborative scheme. The overall aim is to weave lifelong learning into higher education so that graduates and the wider community will be better equipped for future jobs to meet changing workforce demands.

One of the shifts of the *Education Blueprint 2013-2015* is to ensure that every child is proficient in Bahasa Malaysia and the English language. While senior management is very satisfied / satisfied with English as a medium of institution to enhance language competency, only a third of them express similar responses with Bahasa Malaysia as the medium of institution in public universities. However, Bahasa Malaysia is used as a medium of instruction for the Mata Pelajaran Umum (MPU) compulsory subjects in the HEIs, namely, *Tamadun Islam dan Tamadun Asia* (Islamic and Asian Civilisation), *Hubungan Etnik (Ethnic Relations).* These two subjects are mandatory for Malaysian students in their undergraduate studies.

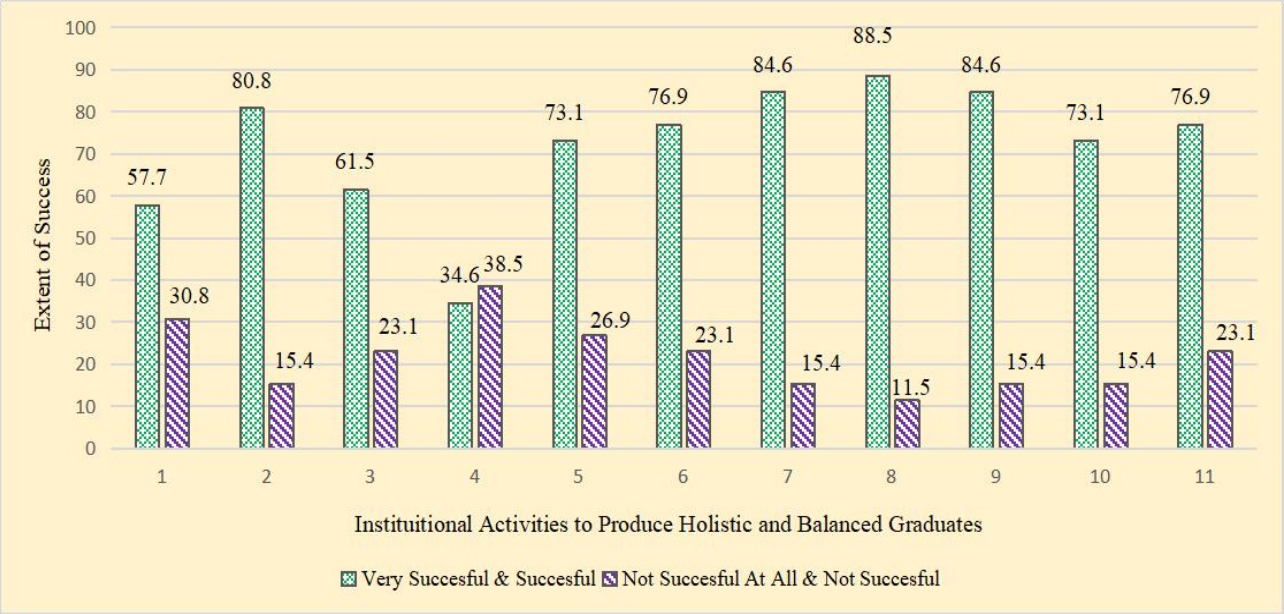
The increase in project and research work facilitates students in learning how to learn and apply knowledge in real life and work situations. This approach, used effectively, inculcates in student personal attributes like leadership capabilities and teamwork, thus enhancing their employment opportunities.

5.7 Institutional Support for Activities to Produce Holistic and Balanced Graduates

The perceptions of senior management suggest that, overall, institutional efforts in producing holistic and learned graduates have been successful. There seems to be a balance in producing graduates to contribute as members of a civil society and work force. However, it is worthwhile to note that the line between activities which support the development of graduates for the civil society and work place is rather blurred.

Figure 5.5 shows that the activities perceived to have contributed very successfully/successfully to the development of holistic and balanced graduates are the implementation of projects to develop leadership skills (88.5%), enhancement of graduates' strengths to function effectively in a multi-cultural environment (76.9%) and development of personal traits in undergraduates so that they become effective members of a Malaysian civil society (76.9%). Some of these activities have also an influence on preparing undergraduates for the place of work.

Activities that are likely to have a direct impact on graduates' preparedness for the work-place are the provision of effective internship programmes (84.6%), facilitation to ensure proficiency in English (84.6%), and collaboration with industry players in the design of the institution's curriculum (80.8%).



1. Implementing online pedagogy like blended learning to enhance student learning on his/her own efforts
2. Collaborating with industry players in the design of the institution's curriculum
3. Adopting an integrated Cumulative Grade Point Average (CGPA) system to assess students' development holistically
4. Ensuring that students are proficient in Bahasa Melayu
5. Developing students' thinking skills in the course of class teaching
6. Enhancing graduates' strengths to function effectively in a multi-cultural environment
7. Providing effective internship programme for undergraduates
8. Implementing activities and projects to develop leadership skills of students
9. Enabling students to be proficient in the English language
10. Creating opportunities for students to initiate business ventures
11. Enhance the development of personal traits in undergraduates so that they become effective members of a Malaysia civil society

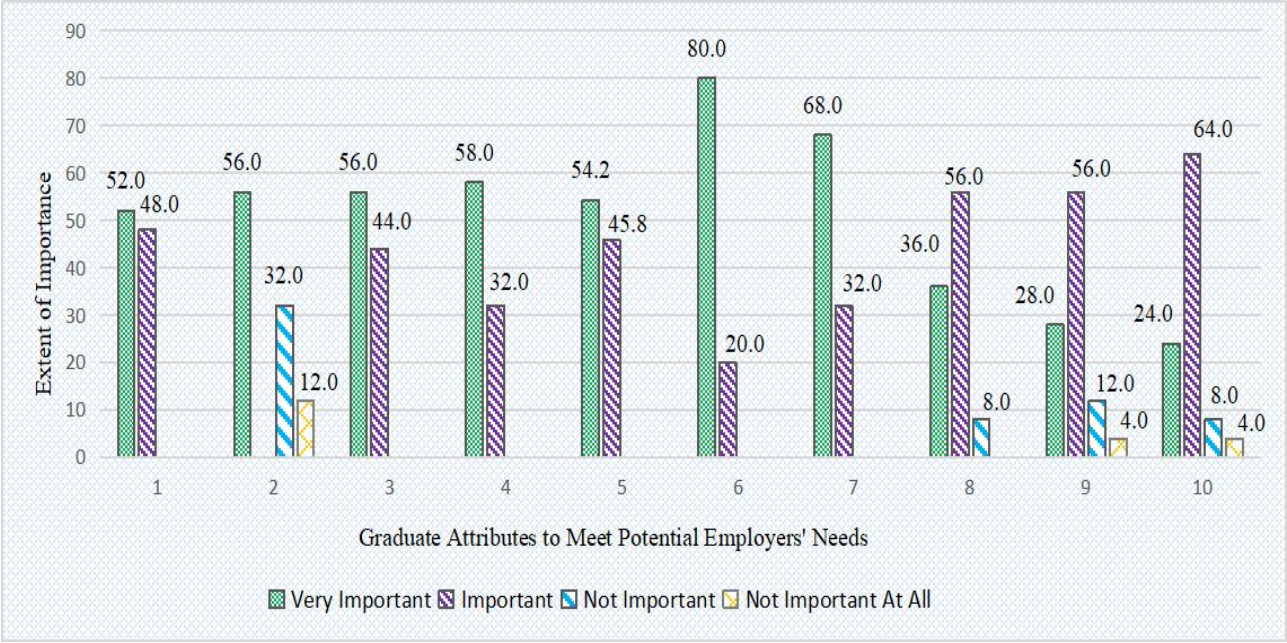
Figure 5.5: Extent of Success of Institutional Efforts to Produce Holistic and Balanced Graduates

The responses suggest that activities like those which ensured proficiency in Bahasa Malaysia and implementation of online pedagogy, for example, blended learning to enhance student learning on his/her own efforts, were not successful and not successful at all. Online pedagogy like blended

learning requires the installation of computer facilities and flipped classrooms, and training of academic staff for its effective implementation.

5.8 Importance of Graduate Attributes to Meet the Needs and Interest of Potential Employers

As expected, the senior management perceived that, practically, all stated graduate attributes were important to meet the needs and interests of potential employers. It is therefore necessary to show, in Figure 5.6, the responses for 'very important', 'important', 'not important' and 'not important at all'



1. General knowledge
2. Competency in Bahasa Malaysia
3. Knowledge specific to disciplines pursued
4. Specific job skills as required
5. IT skills
6. Personality
7. English language competency
8. Exposure to different cultures
9. Internship experience
10. Benefits of having been mentored to whilst studying

Figure 5.6: Importance of Graduate Attributes to Meet the Needs and Interests of Potential Employers

Based on the perceptions of senior management as shown in Figure 5.6, they recognise fully the attributes that graduates should have to meet the needs and interests of potential employers like those sampled in Phase I of this study. The very important attributes are personality (80%), followed by English language competency (68%), specific skills as required (58%), general knowledge (52%) and IT skills (54%).

Competency in Bahasa Malaysia is perceived to be very important by 56% of the senior management though it is not very satisfactorily implemented as indicated earlier on. With regards to internship experience, a higher proportion of senior management (28% and 56%) perceived it to be very important and important respectively. Also, the benefits of mentorship are perceived to be very important (24%) and important (64%) by the senior management.

Attributes	Very Important	Important	Not Important	Not Important At All
Competency in Bahasa Malaysia	56.0%	0.0	32.0%	12.0%
Internship experience	28.0%	56.0%	12.0%	4.0%
Benefits of mentorship	24.0%	64.0%	8.0%	4.0%

The attributes that were perceived to be not important at all are competency in Bahasa Malaysia (12%), and internship experience and mentorship (4% each). However, the 'not important at all' perceptions of these attributes need to be qualified as they are perceived to be very important and important as well.

5.9 Open Comments from Senior Management

In the questionnaire, space was provided for open comments. Ten senior management gave their comments which were written with considerable conviction when read carefully. For example, one of the senior management expressed explicitly that graduate employability is not his concern while another seemed to cry out for industry players to play their part as well in enhancing employment opportunities of fresh graduates. Comments made indicated that a majority of the senior management had carried out adequate preparation for graduates in their studies and future work in the labour market.

For easy reference, the comments are divided into categories, namely, role of universities, academic autonomy, industrial collaboration and pre-requisites for graduation. Almost 50% of the comments are related to internships and collaboration with industries

- Role of Universities
    - University provides the numbers. Employability is not our concern.
    - The industry players should also play their roles. Universities cannot produce graduates who are trained in every aspect of the profession.

- Academic Autonomy
    - The Higher Education Ministry must allow the private colleges/institutions to teach freely without restricting creativity, e.g. strictly adhering to MQA requirements. Developing a student with creative teaching is more important than following MQA requirements. Educational environment must not be controlled as long as it contributes to positive outcomes.
    - Incorporated the know-how and application of knowledge in day-to-day teaching and learning program.

- Industrial Collaboration
    - The industrial linkages between industry and institution will close the gap within, and programs offered by institution will be more relevant to industry needs.
    - More engagement with the industry players via different activities.
    - Projects with employers while students are studying.
    - Involvement of industry players in the internship program at the institution.
    - We provide interview sessions conducted by major accounting firms in our area, Kepong, and students are delighted to be given opportunities to be interviewed. This also provides them with additional knowledge on how interviews are being done as most of them are fresh graduates.

- Prerequisites for Graduation
    - Prerequisites for students to graduate - English language C+ or MUET Band 3, two certificates for organising activities, 4 months of internship with 4 separate reports, and project paper with viva.

6.0 PERCEPTIONS OF ACADEMIC STAFF

6.1 Profile of Academic Staff Respondents

A total of 132 academic staff responded to the online questionnaire (Appendix 3). Of these respondents, a large majority (86.4%) was from the private education sector and a minority (13.6%) was from the public education sector.

Table 6.1: Profile of Academic Staff Respondents

Profile of Academic Staff	Respondents	
	Number	Percentage
Type of Institution		
University	121	91.7
College	9	6.8
University College	2	1.5
Sub-total	132	100.0
Status		
Lecturers	58	45.3
Senior Lecturers	41	32.0
Professors/Associate Professors	29	22.7
Sub-total	128	100.0
Highest Level of Education Attained		
Doctoral	64	48.5
Masters	59	44.7
Bachelors	7	5.3
Others	2	1.5
Sub-total	132	100.0

Table 6.1: Profile of Academic Staff Respondents (Contd.)

Profile of Academic Staff	Respondents	
	Number	Percentage
Place of Award for Highest Qualification Achieved		
Malaysia	91	70.0
Overseas	34	26.2
Transnational	5	3.8
Sub-total	130	100.0
Years Worked in Education Sector		
More than 10 years	72	54.6
6 - 10 years	23	17.4
3 - 5 years	22	16.7
Below 2 years	15	11.3
Sub-total	132	100.0
Years Worked in Non-Education Sector		
Below 2 years	43	32.6
None	34	25.8
3 - 5 years	30	22.7
More than 10 years	18	13.6
6 - 10 years	7	5.3
Sub-total	132	100.0

Table 6.1 shows that a very large majority of the academic staff (91.7%) are from the universities. As for status, 45.3% are lecturers, followed by 32% of senior lecturers, and 22.7% of associate professors/professors. A very high proportion of the academic staff possesses postgraduate qualifications (48.5% with doctorals and 44.7% with masters), with only 5.3% who hold bachelor's degrees. Unlike senior management, 70% of the academic staff graduated with doctoral degrees from local universities and 26.2% obtained their highest qualification from overseas HEIs. A

sizeable majority of the academic staff (82%) had worked in the education sector between 6 years and more than 10 years. However, exposure to the non-education sector was minimal. While almost a third of the academic staff (32.6%) have worked below two years in the non-education sector, almost a quarter (25.8%) have zero experience outside their work in education. In sketching a profile of an academic staff in this study, he or she is normally employed as a lecturer or senior lecturer with a postgraduate qualification in a local university. Furthermore, he or she is an experienced lecturer with more years of work in an education rather than a non-education setting.

6.2 Factors Influencing Students' Institutional Enrolment

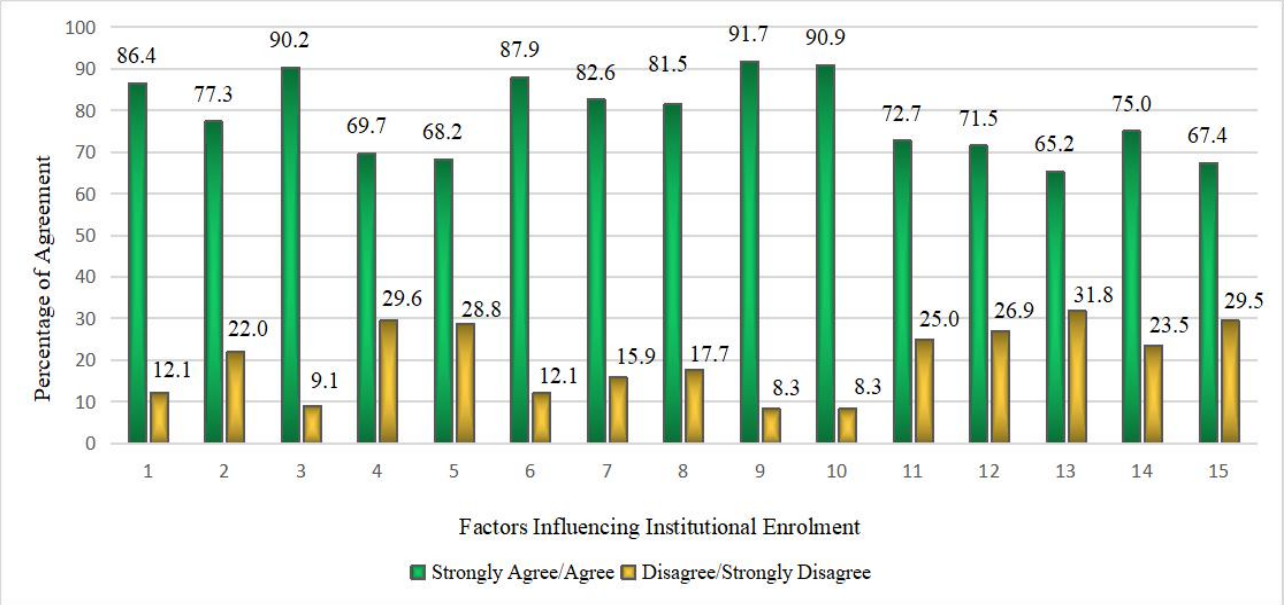
A precise interpretation of perceptions is plausible with a consideration of the contextual environment that respondents work in. In this study, about 64% of the academic staff who responded are employees of University B, a not-for-profit private university owned by an Education Foundation which receives funding from alumni, benefactors and individuals. The main objective of this private university is to provide affordable tertiary education to the community, especially families that are challenged financially. Therefore, fees charged are relatively very affordable. As indicated earlier on in Section 5, the fees for an undergraduate course in economics in public universities is above RM24,000 and in the top private universities, it is much higher at RM90,000. In University B, the fees charged for the same course over a three years' duration is a moderate RM40,000.

With this understanding, it is not a surprise, as shown in Figure 6.1, that 91.7% of the respondents perceived affordable fees to be the primary factor in influencing student enrolment in HEIs, a response that was shared with senior management. This was followed by the statement that the institutions has a good academic record (90.9%) and its qualifications are valued by employers (87.9%).

What seems intriguing is that about 86.4% of the academic staff perceived that students are enrolled in specific institutions at the insistence of parents and friends. This perception may be seen to be 'real' to academic staff who are in continuous contact with students in and outside classes, and with parents, especially on institutional 'Open Days' and in education fairs.

This perception is further supported by the outcome of focus-group interviews with students in Phase II of the study. The views expressed in the focus-group interviews were not entirely similar to those derived from the online survey with respect to the reasons for the selection of institutions to

enrol in. While institutional reputation remained a main reason for choice of HEIs, as is the case with the sample of academic staff under discussion, the influence of parents was cited by many participants in the focus-group interviews in Phase II of the study. In the Asian context, parental



1. Parents/family insist that he/she should do so
2. His/her friends are studying here
3. The institution is well-regarded locally
4. Campus environment
5. Alumni of the institution
6. The qualification is valued by employers
7. Graduates find it easy to get employment upon graduation
8. The institution is recognised internationally
9. Tuition fees charged is affordable
10. The institution has a good academic record
11. Social media
12. Education fairs or exhibitions
13. The programme provides international experience like study abroad schemes
14. Internship is part of the programme
15. Advertisements

Figure 6.1: Factors Influencing Institutional Enrolment As Perceived by Academic Staff

influence is strong on the up-bringing of their children, including the selection of institutions and programmes of studies. That it is normal for parents to be responsible for the payment of fees and other related expenses seems to be sufficient justification for parental decision regarding the selection of institutions and fields of study.

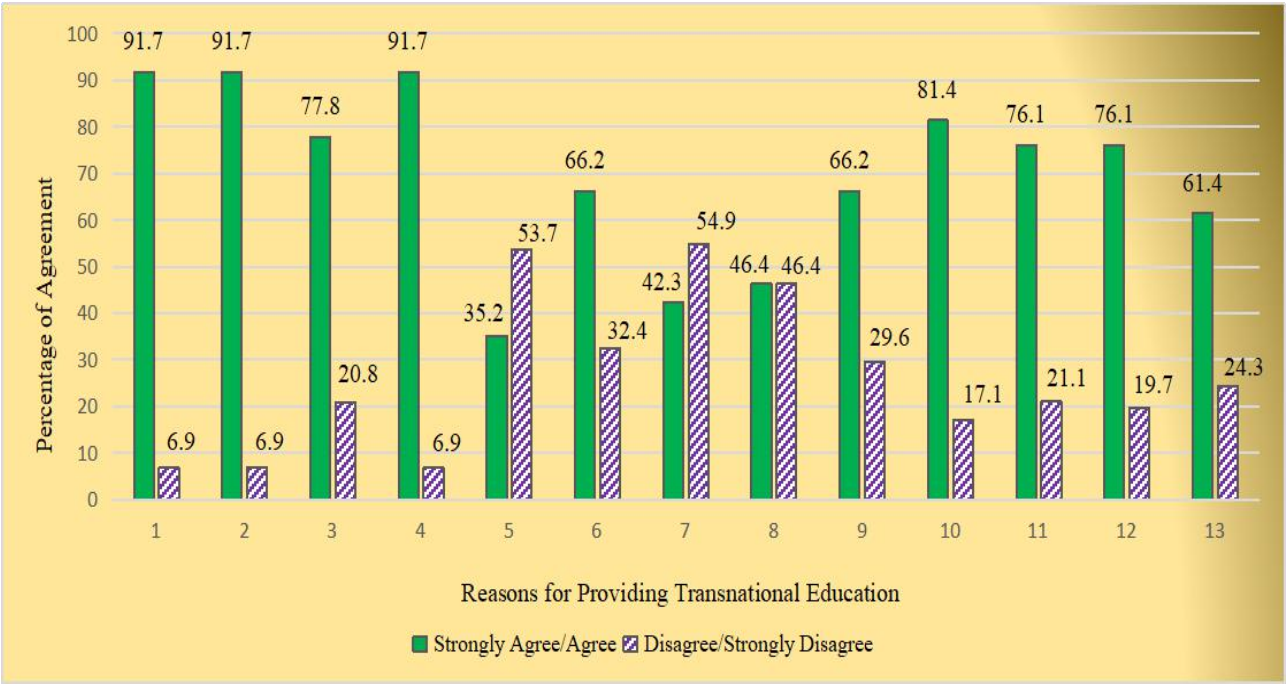
There were common grounds for strongly disagree and disagree responses between senior management and academic staff. Factors that do not influence the choice of institutions are provision of international experience like study-abroad schemes, advertisements and alumni of institutions.

6.3 Provision of Transnational Education

As shown in Figure 6.2, the top four reasons for providing transnational education as perceived by academic staff were similar to those given by the senior management though the rank order in percentage terms was different. Responses indicate that transnational education was provided as it costs less in tuition fees and other expenses than going abroad, enhances internationalisation of curriculum, and employers place a premium on the ability of graduate employees who are proficient in English (91.7% each) and provides greater international exposure than a local home-grown qualification (81.4%).

A majority of the academic staff strongly disagreed/disagreed that TNE graduates earn a higher salary than those with a local home-grown qualification. They seem to realise that the initial salary earned is not dependent entirely on the type of educational programme which grants the qualification. Salary earned is contextual and situational dependent, and the attributes of an individual are yet another important consideration.

Disagreement was also expressed that TNE programmes were provided as the HEI did not have degree-granting power (53.7%) and that the programme was offered only in the TNE mode (46.4%). When private colleges were upgraded to university colleges, they were empowered to confer their own undergraduate and postgraduate degrees. However, on-going TNE programmes were continued and so did the search for new oversea partners. This was a pragmatic move as there was uncertainty whether their own home-grown programmes and qualifications would be received equally well as TNE degrees by students and parents. TNE programmes were ‘safety nets’ for the private education sector in respect to student numbers.



1. It costs less in tuition and other expenses than going abroad
2. A TNE programme enhances internationalisation of curriculum
3. A TNE programme enhances internationalisation of teaching staff
4. Employers place a premium on the ability of graduate employees who are proficient in English
5. The institution does not have degree-granting power
6. A job is easier to get upon graduation with a TNE qualification than with a local home-grown qualification
7. TNE graduates earn a higher salary than those with a local home-grown qualification
8. The programme was offered only in TNE mode
9. TNE meets the demand of the labour market for employable graduates
10. A TNE programme provides greater international exposure than a local home-grown qualification
11. The demands of the TNE programme are met adequately in relation to student capability for good performance
12. Extra-curricular activities are provided to develop students' competencies
13. A TNE programme develops critical thinking much more than a local home-grown qualification

Figure 6.2: Reasons for Providing Transnational Education

Presently, TNE programmes are not only offered in private universities but also in public universities. Examples are the dual degree awards of the National University of Malaysia and

Duisburg-Essen, Germany since 2000 and the International University Malaya - Wales programmes introduced in 2013.

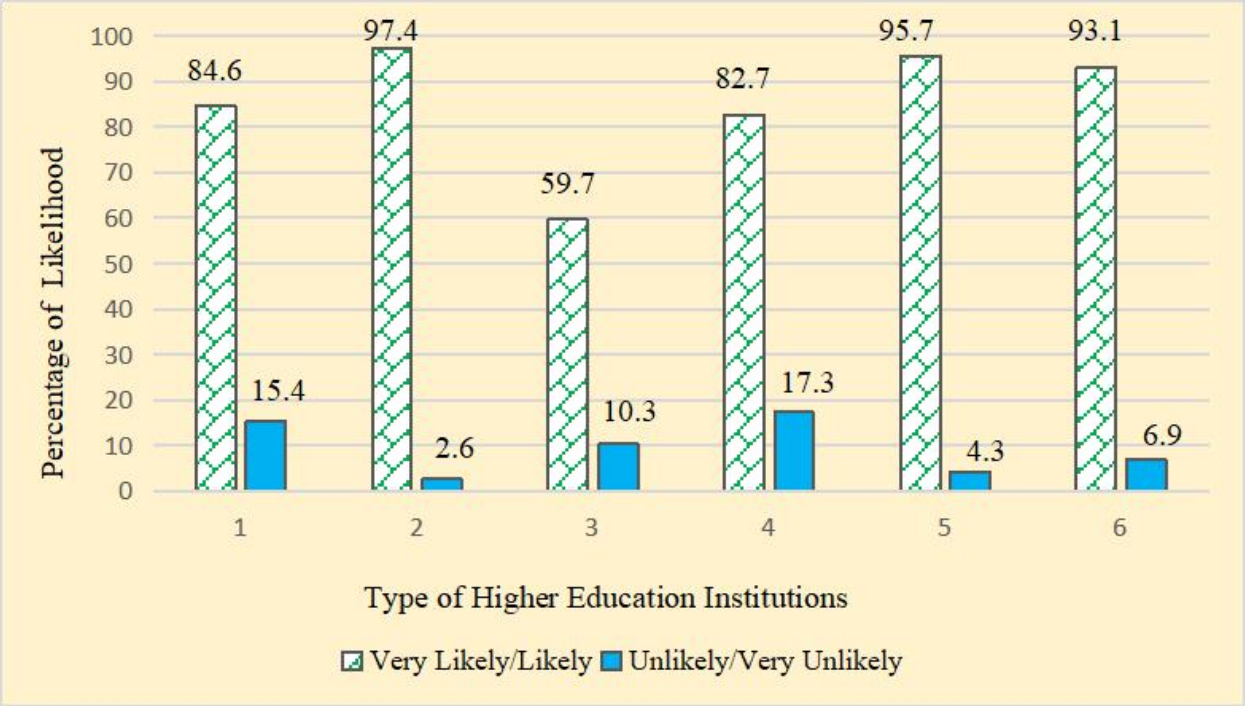
6.4 Employment Opportunities in Relation to the Type of Institutions Awarding the Qualification

Figure 6.3 (p.77) indicates the perception of academic staff on the likelihood for employment from different types of institutions. Local private universities, with a proportion of 97.4% of very likely/likely responses, were perceived to be deserving of the best consideration for the enhancement of employment opportunities. However, there is still an emphasis on the value of a truly international degree with a decreasing value as teaching and learning processes become more local in approach and practice. About as high as 95.7% and 93.1% of the academic staff considered that the qualifications from international branch campuses in Malaysia and foreign universities outside Malaysia would very likely/ likely enhance employment opportunities. It should be noted, however, that while the response may fall from very likely/likely the more local as institution becomes as in local public universities (84.6%), local private colleges (82.7%) and local university college (59.7%), there is still a strong perception and expectation of employment given the TNE focus or activities present within these institutions.

6.5 Institution Adequacy in Preparing Graduates for Employment

As shown in Figure 6.4 (p.78), a high proportion of the academic staff was very satisfied/satisfied with what the institution had undertaken in preparing graduates for employment in the first place. This relates to the recruitment of academic staff with 91.5% and 89.7% perceiving the lecturers to be qualified and experienced respectively. This perception is supported by the fact that 47.8% of the academic sample possessed doctoral qualifications and 44% were holders of master's degrees. A majority of them (54.6%) had worked in the education sector for more than 10 years and 17.4% were educationists with experience of between 6 and 10 years.

Perceptions were also focused on the academic role of lecturers with regard to the teaching and learning process. About 88% of the academic staff perceived that clear assessment criteria had been provided, followed by 82.1% who responded that students were given feedback on their performance.



1. Local public universities
2. Local private universities
3. Local university colleges
4. Local private colleges
5. International branch campuses in Malaysia
6. Foreign universities outside Malaysia

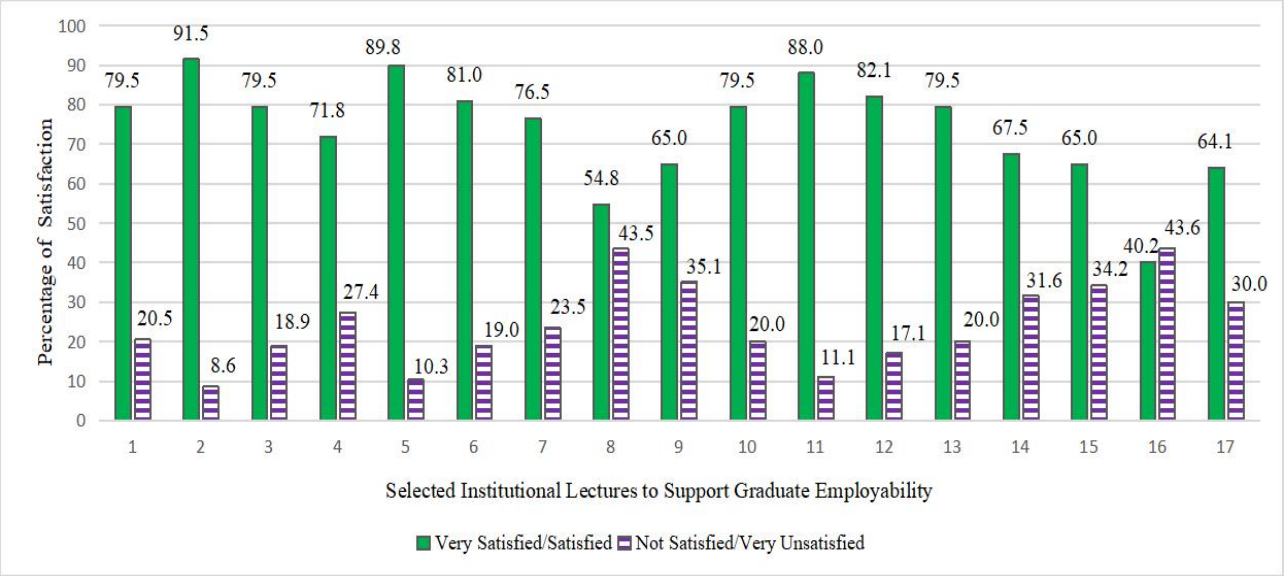
Figure 6.3: Types of Institutions and Employment Opportunities

While academic staff were very satisfied/satisfied with the provision of qualified and experienced lecturers and class teaching related to assessment and student feedback, they were not satisfied/very unsatisfied with other provisions to enhance graduate employability. For example, more than a third of the academic staff perceived that less efforts were made to provide Bahasa Malaysia as the medium of instruction (43.6%), student's access to international employers during the degree course (43.5%), opportunities to link with alumni (35.1%), interview technique support (34.2%) and curriculum vitae/resume writing support (31.6%).

6.6 Institutional Success in Implementing Activities to Produce Holistic and Balanced Graduates

Both academic staff and senior management shared the same perceptions in respect of three activities implemented to produce holistic and balanced graduates. Figure 6.5 (p.79) shows that the

academic staff were very satisfied/satisfied with the implementation of activities to provide effective internship programmes (91.4%), develop leadership skills (83.6%), collaborate with industry players in the design of the institution's curriculum (81.2%) and enhance the development



1. English as a medium of instruction to enhance language competency
2. Qualified lecturers
3. Students' access to employers during the degree course
4. Availability of career advice
5. Experienced lecturers
6. Up-to-date curriculum
7. Course content which meets needs of industries
8. Students' access to international employers during the degree course
9. Opportunities to link with alumni
10. Project or research work
11. Clear assessment criteria
12. Feedback on student performance
13. Industry advisors who ensure relevance of course curriculum
14. Curriculum vitae / resume writing support
15. Interview technique support
16. Bahasa Malaysia as the medium of instruction
17. Support in the learning of languages other than English and Bahasa Malaysia

Figure 6.4: Institutional Engagement in Student-Support Provisions in Employability

of personal traits in undergraduates so that they become effective members of a Malaysian civil society (78.4%). Based on the high percentages reflecting the perceptions of academic staff, the efforts made suggest a concerted effort to enhance graduate employability (collaboration with industry in respect of internship and curriculum design) and produce holistic and balanced graduates (development of leadership and other personal attributes to become effective members of a Malaysian civil society).

1. Implementing online pedagogy like blended learning to enhance student learning on his/her own efforts
2. Collaborating with the industry players in the design of the institution's curriculum
3. Adopting an integrated Cumulative Grade Point Average (CGPA) system to assure students' development holistically
4. Ensuring that students are proficient in Bahasa Malaysia
5. Developing students' thinking skills in the course of class teaching
6. Enhancing graduates, strengths to function effectively in a multi-cultural environment
7. Providing effective internship programmes for undergraduates
8. Implementing activities and projects to develop leadership skills of students
9. Enabling students to be proficient in the English language
10. Creating opportunities for students to initiate business ventures
11. Enhance the development of personal traits in undergraduates so that they become effective members of a Malaysian civil society.

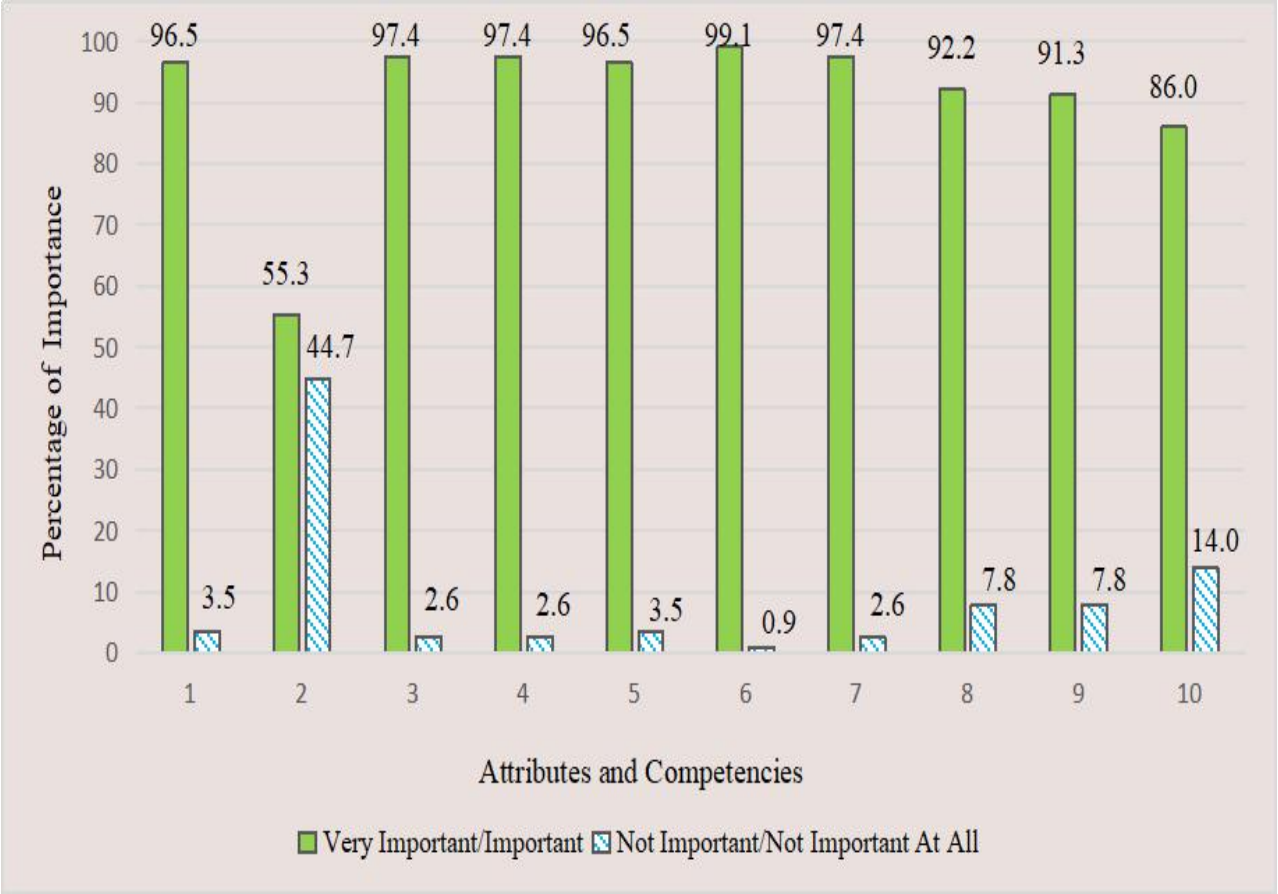
Figure 6.5: Institutional Success in Implementation of Activities to Produce Holistic and Balanced Graduates

However, a third of the academic staff perceived that institutional efforts in the implementation of two activities were not successful/not successful at all. These were to ensure students are proficient in Bahasa Malaysia (39.1%) and implement online pedagogy like blended learning to enhance student learning on his/her own efforts (30.8%).

6.7 Importance of Attributes and Competencies for Employability

Figure 6.6 shows that the academic staff realises fully the attributes and competencies required by potential employers. Personality was perceived to be the most important attribute as responded to by almost every academic staff in the sample, the proportion being 99.1%. This was followed by knowledge specific to the discipline pursued, specific job skill required and English language proficiency, each scoring with 97.4% of the academic staff.

About 44.7% of the academic staff perceived competency in Bahasa Malaysia as not important, followed by exposure to different cultures and internship experience (7.8% each). Except for competency in Bahasa Malaysia, none of the respondents perceived the attributes and competencies given as not important at all.



1. General knowledge
2. Competency in Bahasa Melayu
3. Knowledge specific to discipline pursued
4. Specific job skill as required
5. IT skills
6. Personality
7. English language proficiency
8. Exposure to different cultures
9. Internship experience
10. Benefits of being mentored to whilst studying

Figure 6.6: Importance of Attributes and Competencies to Meet the Needs and Interests of Potential Employers

6.8 Open Comments by Academic Staff

A total of 32 open comments was made by the academic staff, ranging from self-praise to self-criticism. For easy reference and discussion, the comments were divided into eight categories - overall, teaching and learning, attributes, English competency, ethics, industrial collaboration, career counselling and quality education.

- Overall
    - Good quality university
    - Quality curriculum
    - Well done
    - Developing many programmes besides academic to ensure that the success of the graduates is by design and not by chance.

- Teaching and Learning Process
    - Less documentation and window displays, more teaching and more trust and support to academic staff.
    - Examination marks allocated should be less than 50% as practice is more important than theory.
    - 'X' university has provided a comprehensive practical and theory blended learning approach that enhances its graduates via problem-based learning.
    - The universities should engage in more teaching and learning practice by using trendy technologies.

- Attributes
    - Change the culture of dependent thinker or doer to one of being independent. Make English reading and writing as a part of their thought process. Need more activities to provoke student thinking and invoke student's critical mind. This institution is failing to nurture students but using them as a means to make profits.
    - Give more attention to students' emotional needs. A little goes a long way :). Thank you.

- English Competency
    - To improve students' English skills in speaking and writing for the job market, and broader scope in general knowledge.
    - Maximise the use of English as the medium of instruction. Make sure that academicians possess high qualification in both academic profession and language proficiency.
    - Lectures should be in English language. Language proficiency should be a criteria when marking assignments. Lecturers should not say 'grammar is not important', and 'This is not an English paper'. Send lecturers for English classes.

- Ethics and Work
    - By providing relevant exposure to strong work ethics and a good foundation in the necessary skills and knowledge.
    - In our university, many students have worked in temporary positions or taken up vacation jobs. This, I think, is a very good initiative on the part of students as it will definitely enhance employability. The importance of school of hard knocks should not be underestimated. Thanks.
    - No mention is made on the importance of ethical conduct with reference to employability. Good work ethics and integrity are very crucial. This should be instilled at the university level.

- Industrial Collaboration
    - 'Y' university should increase the budget for industry talks and field trips. It is difficult to get an industry person to give a 'free talk' to the respective units. When the budget is extremely limited, it is hard to get an 'expert' to share his/her experience with students.
    - Invite industry players for final-year project exhibitions.

- Far greater exposure to the world of work through immersion programmes, live projects and continued partnerships with select industry / employer groups.
- Industry values the internship experience of the students as the program prepares them for their integration and performance of actual work later on.
- We set up employer suites that are branded by each prominent employer to enchance their presence in our institution and they are always invited to participate in judging of our competitions.
- Paradigm shift in curriculum design by using 2u2i mode of (2 years university + 2 years in the industry). Students are work-ready upon graduation.
- In medicine, dentistry and pharmacy, there is already the housemanship / pupillage which is on-the-job training. However, we need to build in internship of one semester to all the other health science courses as well as entrepreneurship and research methodology / statistics. Our local medical programme has an in-built 6 months of shadow houseman and we think this is a reason for our graduates being housemen within 6 months in MOH hospitals in a study by MOH about 4 years ago.

- Career Counselling
    - Although we have had Career Days as a match-making event between graduating students and prospective employers, the participation by private sector organisations is much to be desired. We seem to be more successful by involving industry practitioners for talks and seminars on topics related to their skills or practices. HR personnel are more likely to decline to talk to students (fear of commitments, promises, busy or of no value to them to do so?).
    - We provide career counselling, internship open days, assistance with student mobility, interactive learning spaces etc.

- Quality Education
    - Improve university ranking locally and internationally.
    - Need to seriously improve the quality of education.

A majority of the comments relate to industrial collaboration and internships, reflecting the need for HEIs to work with the industry so that graduate employability is enhanced. Also, some concerns have been raised regarding private HEIs and profit-making, and English language competency of not only students but academicians as well.

7.0 FOCUS-GROUP DISCUSSION AND INTERVIEWS WTH SENIOR MANAGEMENT AND POLICY MAKERS

7.1 Organisation of Focus Groups and Interviews

This study has both quantitative and qualitative data. While quantitative data is obtained from an online questionnaire to senior management and academic staff, qualitative data is derived from focus-group discussion with senior management and interviews with policy makers. Deans and their deputies, and Heads of Faculties/Schools/Departments, constituting a part of senior management, are required to lecture as well though the teaching workload is much less than that of lecturers.

Focus-group discussion and interviews were guided by a set of questions which served primarily as prompters where and when necessary, details of which are shown in Appendixes 2, 4 and 5. Four focus-group discussions and two interviews were carried out and 20 participants were involved.

The outcome of the focus-group discussion and interviews is discussed under several perspectives related to graduate employment and employability. The perspectives are definition of graduate employment and employability, university education and employment opportunities, curriculum relevance and quality, industrial collaboration and internships, students' perspectives on employment trends, the Malaysian Education Blueprint 2015-2025, and the role and policies of MOHE and the government. A brief background information on each of these perspectives precedes the write-up of the focus-group discussion.

7.2 Definition of Graduate Employment and Employability

The two main concepts of this study are 'employment' and 'employability'. It was considered appropriate to ascertain how these two concepts were defined by the participants of the focus-group discussion and interviews in the first instance. There was a clear distinction made between the two concepts. However, most them did not categorise the various types of employment such as the over-employed, the under-employed (the matching theory) and the self-employed.

- When asked, the participants made a distinction between employment (to secure a job) and employability (to be equipped with skill sets). At the fundamental level, employment was the condition of having paid work while employability was the capacity of the person for the job. The emphasis was that the MOHE is interested in pursuing employability for life – not a job for life. This brings into focus the concept of life-long learning so that Malaysians are enabled to reskill and

upskill themselves to meet the ever changing demands of the labour market. The ultimate goal is to make life-long learning a way of life for all Malaysians.

- The definition is elaborated further when it was expressed that on the one hand, 'graduate employment is getting the right fit of a job for a graduate based on the skill set obtained from the university' while on the other 'graduate employability refers strictly to a graduate being employed'. Here, graduate employability is about how a graduate adapts himself or herself to the demands of industry. A case in point is when a mechanical engineer, on graduation in University 'T', is unemployed due to the low demand for his profession at that point of time. Sensing the labour market's high demand for civil engineers, the mechanical engineer acquires civil engineering skills on his own efforts with the help of technology and, ultimately, becomes the managing director of a civil engineering company and creates jobs for others as well. Rounding up the discussion on the definition of the employment and employability, the participant closes with 'when we have those kind of graduates, so employability is about adapting to the job market and the current industry demand'. It is much more than being equipped with the skill sets.

7.3 University Education and Employment

The participants were asked to respond to an open comment made by a vice-chancellor who wrote that 'It is not the university's role to prepare undergraduates for employment'. Their responses ranged from a comprehensive and wholesome outlook on university education to one where the responsibility to learn is placed squarely on the shoulders of students as summarised below.

- According to University B, there is no alternative to an university education to bridge the gap between post-secondary education and the workplace. The higher education institutions impart knowledge which serves as 'a tool to change life' and skills with the objective of 'working towards a better tomorrow' for the individual, community and nation. University education has to be relevant to industry needs (employment and employability) and create in students an awareness of what goes on outside the university environment. The inculcation of values and good morals, and the provision of rich experiences will enable the individual student to attain whatever goals he/she has. The university has to ensure that the students complete their courses, work and contribute to societal development.

- From the outset, University A's focus has been on information technology and, subsequently, innovation when the institute was upgraded to a university college. Apart from providing knowledge

in disciplines taught, University A emphasises the development of skills and values in order to enhance the employability of its graduates. The employability of graduates poses not only as a concern of the University but also that of parents when course choices have to be made for their children.

- On entering a university, undergraduates pursue specific disciplines, the choice of which is determined by the parents or students themselves or counsellors advice or job market trends or a combination of these considerations. Within the chosen discipline, it is the role of the university to facilitate students in 'learning how to learn'. This approach will enable undergraduates to be self-learners and apply the knowledge, skills and experiences gained at work and in their lives.

7.4 Graduate Tracer Studies

Since 2009, SETARA and MyQuest require HEIs to update MOHE on the employment status of their graduating students, including those who are pursuing further studies and courses to enhance their skills, and the unemployed. On an average, the participating HEIs indicate a graduate employment rate, which ranges from 70% to above 90%. To some of the participants, graduate unemployment is due to two issues. The first issue relates to the poor quality of the graduates. As for the second issue, graduates may have pursued the wrong course for various reasons like having to comply with parental choice, which is different from their own preference. This results in a lack of interests and motivation in their studies, the end being negative in outcomes.

Much of the profile of graduate employment and other related features that is sketched from the Graduate Tracer Studies conducted by MOHE can only be indicative and interpreted with some caution as highlighted earlier on in Section 2.0. Specific comments on and reservations of the Graduate Tracer Study are given below.

7.4.1 Gestation of Six Months Following Graduation and Employment

- UK does a survey of 6 months post-graduation – DELHE (Destination of Leavers from HE). The problem with this – as with Tracer – is that the 6-month period after graduation is not always a very good indicator of employment. There is to be a move in the UK to a 15-month survey. In addition, the most recent development has been something called LEO (Longitudinal Educational Outcomes) and this tracks students 5 and 10 years out from graduation and looks specifically at

earnings. Therefore, it offers a very direct measure of return on investment but it takes a long time to get results! Neither of these do well at picking up graduates who are self-employed.

7.4.2 Interpretation of Being Employed – A Necessity or An Option

- Millennials, for example, have the option of not actively seeking employment immediately post-graduation. Similarly, public universities show higher employment as these students come from lower socio-economic status and thus getting a job is not an option but is a necessity.

- Overall, the average employment rate as indicated in SETARA 2017 is above 60%. This relatively low rate of employment is not seen as an issue of graduate employability but more of a personal choice on the part of graduates. Graduates in University N prefer to take a break like a gap-year following graduation or to continue with postgraduate studies.

- Absolutely no problem of graduates don't get jobs in University T. It is because they don't want to. We have students who are taking it easy for the next 6 months after graduation (on holiday) and many of them too. Somehow, these two key words 'employment data' – because our students are good, they're tired. They know that after this, life will not be the same. Once they start work, it will be for the next 35 years. You know this is my time; my father can afford it and so why not take a break and go on a tour. Amazingly, these students sometimes end up in volunteering work. They try to find meaning to life, like you can find them in '*rumah orang tua*' (Old Folks Home), '*rumah anak-anak yatim*' (orphanage) or teaching in '*sekolah orang asli*' (school for the indigenous people) and this is good.

7.5 Field of Studies and Employment Opportunities

The Graduate Tracer Study provides data on employment by field of studies, namely, arts and social sciences, science, technical studies, information and communication technology, and education. An overview of employment trends based on the Graduate Tracer Studies from 2009 to 2015 suggests that the employment rates are higher for the arts and social sciences, normally registering the largest output of graduates, than the sciences. However, the fields of studies with the highest employment rate are those related to professions like education (teaching and training as examples) with 80.1% being employed, followed by technical studies (51%) and information and communication technology (50.2%) as indicated in the Graduate Tracer Study 2015. In the same study, the rate of employment for the arts and social sciences was 49.2% and the sciences 44.4%.

7.5.1 Professional and Non-Professional Studies

- Most significantly is the higher employment rate of students from professional fields, showing that there is still a demand for graduates in certain professions. The dilemma we have in the current system is the large number of 'non-professional' programmes that do not prepare students particularly for any one career. These 'generalists' are usually not equipped adequately to meet employers' demands. Thus, there is a need to rethink the curriculum of these programmes.

An HEI that focuses on professional accounting courses has no issue whatsoever with graduate employment. More than 85% of its annual output of graduates are employed in the Big 5 accounting firms (Pricewaterhouse Coopers, Ernst & Young, Deloitte, KPMG and BDO Global) and corporations like Maybank, CIMB, Shell and IBM as examples. The Chief Executive Officer of the HEI takes a personal interest in ensuring the employment of his graduates. At the convocation, personal checks are made with 200 over of the graduates and 85% of them would have been employed by then. The remaining 15% of the graduates would receive the CEO's personal attention in matching their curriculum resume with small accounting firms so as to gain work experience before moving on to the Big 5 in their careers. The 'X' positive factor is that the CEO has a par-excellence relationship with the industry's accounting firms. In fact, the CEO has established space called 'executive suites' on campus for the Big 5 and, in the act of doing, he has literally brought the industry to the premise of the HEI.

7.5.2 Disciplines and Employment Opportunities

- Employment rate varies from one discipline to another. For example, when oil and gas prices were up, chemical engineering in University N was popular and employment of chemical engineers was favourable. The very opposite occurred with the slump in the price of oil and gas in 2016 and early 2017. Graduates of courses like environmental studies will find it relatively more difficult to be employed where demand is relatively low in Malaysia and other developing countries.

- University B has minimum issue with graduate employment. With IT, over 90% of the graduates are employed within 6 months of graduation. This is partly due to the fact that (a) the faculty works very closely with the industry players who are invited to talk to students and interview them during Career Day (b) the faculty implements programmes of relevance to industry needs and imparts knowledge and skills. Teaching is focused on 'hands-on' experience and practicals which students like as they have 'to see and touch before they can visualise'. IT graduates are well

accepted by industry and employers though they cannot be expected to contribute effectively in the workplace within the first 3-6 months of employment.

Ironically, the 17 industry is 'hot' and, hence, the demand for graduates is equally 'hot'. Therefore, admission for postgraduate studies is relatively low as the industry offers salaries that are much higher than even postgraduate scholarships.

With business graduates, some are given two or three jobs even before they graduate. This is partly due to the tenacity of our students and the positive outlook of the business and related sectors.

7.6 Curriculum Relevance and Quality

The HEIs operate under a fairly regulated system of education. They are under the aegis of the MOHE, in general, and the MQA, in particular. With public HEIs, the government continues to fund over 90% of their costs and justifies its role in the formulation of policies via MOHE and University Councils. As for private HEIs, their operation depends on the issuance of licenses from the MOHE.

MQA is the national quality agency approved by Parliament to implement the Malaysian Qualifications Framework (MQF) with effect from November, 2007. Its function is to grant approval for the establishment of private HEIs. In addition, it conducts enforcement and monitoring of their activities. Of note is that the MQF covers both public and private HEIs, accreditation of courses and other related functions.

Shamsul Bahrin (2011) contends that private education in Malaysia is relatively over-regulated. There is the tendency for MOHE to continue introducing new rules without strict enforcement. It would be in the long-term interest of private education if the government were to refrain from micro-managing such institutions but provide a clear framework for maintenance and sustenance of academic standards. Executive bureaucracy can also lead to inefficiency and delays that usually have negative results. There seems to be a general perception that the playing field becomes uneven according to operator accessibility to the authorities. Similarly, there have been instances when university and university-college status have been accorded to institutions that have yet to fulfill all required rules and regulations. In addition, questions have been raised regarding the ranking of some HEIs in SETARA and MyQuest, and a case in point was SETARA 2011.[10]

In operational terms, MQA has made some significant progress since the write-up of Tengku Shamsul Bahrin in 2011. It has advanced technology in usage and saved many a tree in moving from hard copies to online submission of new programmes and accreditation. However, based on the participants' comments, there is still considerable room for improvement.

The participants were prompted to express their views on curriculum change for relevance, up-to-dateness and quality. Their discussion is summarised or given as quotes below.

7.6.1 Regulators and the Regulated

- A research and industry-based curriculum at University A has enabled and sustained relevance and up-to-dateness in course contents. However, University A's efforts in curriculum development and change 'can be boosted with some flexibility and speed in the approval of new courses and course accreditation by MQA'. It was said that MQA panels tend to focus on nitty-gritty issues like the number of steel bars to ensure security of sites where examination papers are housed, and demonstrate 'inflexibility and conformity' in that all courses must be assessed by examinations, irrespective of the nature of contents taught. A member of the focus group expressed, in frustration but with a sense of humour, that he could talk about the impact of MQA for as long as a week!

> It was expressed that being a university, HEI A should be trusted to have the ability and capacity to make changes and fix problems quickly without waiting for the green light to do so from MQA and MOHE. Quality assurance can be ascertained via graduate output and employment records and normal institutional audit by the authorities at 3-5 years' interval.

- A comment was made that the MOHE did not implement fully the recommendations made in the Economic Transformation Programme 2010 regarding the benefits of HEIs awarded a rating of 5 and 6 stars in SETARA. Examples are the increase in the duration of operating institutional license from 5 to 10 years and self-accreditation. It was remarked that there seems to be a LACK of TRUST between MQA and private HEIs. Sandwiched between the policies and regulations of the overseas home-university and MQA, University R seems somewhat restrained from being innovative and creative in the offering of courses and curriculum development.

7.6.2 Relevance of Curriculum

- We often see changing trends in employment. For example, Malaysia lacked doctors and pharmacists about 10 years ago but, today, there is an oversupply. The one field that seems to be recession-prove is business. This is because graduates are flexible and not highly specialised. Pure sciences are also losing their lustre and there are more applied science opportunities today.

- Arts and humanities in University R is probably the weakest area. This is because students often end up either self-employed or take time to freelance before taking the best job.

- I am a bit worried about STEM as students taking it are reducing in numbers. In school, the headmaster/headmistress is given Key Performance Indicators (KPI) in exam pass rates. So the less able students are not allowed to take tougher subjects like STEM. Why not? Additional mathematics is a very useful subject but not many students are taking it. I feel that STEM will suffer and we have to promote it. If not, we may have to depend on engineers from Bangladesh or China to work with us in the future. This is sad, as employers will try to suppress their salaries as they are doing now.

- The rapid development of technology creates a need for IT courses to be up-to-date and relevant for industrial purposes. In the teaching of IT in University B, the transfer of fundamental knowledge and skills is essential. One can be taught how to fish, hunt and acquire job-specification skills. However, what is important is to know 'how to train the brains of students to be smart'. On immediate employment, graduates are not in a position to contribute to the firm or industry.

- Measures taken by IT to enhance curriculum relevance are (i) use of latest technology as case studies to teach the fundamentals. A good grounding of fundamentals and practice will enable students to resolve industrial and work-related problems (ii) staff are given hours for self-development and training – 40 hours per year, including participation in workshops, seminars and conferences, and (iii) there is the on-going practice of staff discussion on the implementation of new technology as a tool to impart fundamental knowledge and skills.

- Importance is given to English language proficiency in University A. On entry into courses, English language competency of students is ascertained by the teaching staff at the Language Centre. Students who do not meet the English language requirement for courses to be pursued attend intensive English classes for a month's duration. On passing, students gain a half-point credit. Observation suggests that students' confidence in the use of the English language has been enhanced

though slow in pace. Also, presentations are built into course curriculum which include topics on social etiquette, communication and the work environment.

- The Faculty of Creative Industries, which incorporates the Department of Modern Languages, is a service unit to all other faculties and departments of University B. Students pursue the English for Specific Purposes course. In addition, students attend soft-skill classes which award them certificates on meeting the required credits for successful course completion. Extra classes are conducted for students who are weak in English. Furthermore, graduates are not given their scrolls on graduation until and unless they score at least Band 3 of the Malaysian University English Test (MUET).

- The development of soft skills like English competency is not considered an issue in University N. This is because new student recruits are required to fulfill all language and academic requirements for course admission. In addition, conditional offers are not allowed in University N.

7.6.3 Quality Curriculum

- University should rethink the way in which programmes are proposed and planned. It will not be a bad approach to be industry-originated when a new curriculum or programme is being developed. Often, course curriculum developed is based on the Ph.D qualification of lecturers. This should be approached with some caution.

- I think our system *macam tak bagi space* (does not give space) to students to reflect. It is too regulated. Universities tend to over react – the word is over-prescribed. The university tells students that they can be responsible. But when everything is translated into credit-bearing programmes, it becomes just another subject. It does not go into your heart and mind – and that is the problem. Students do not internalise and somewhere along the line, good citizenship or patriotism is lost because education is too formalised.

7.7 Industrial Collaboration and Internships

Recently, there has been a big push for industrial collaboration and internships in HEIs. This is due partly to the dissatisfaction of employers with respect to new graduates who lack soft skills and work experience in recruitment exercises. Industries indicated a willingness to collaborate with academia in curriculum development, internships and career talks.

Internship provided to date takes various forms in relation to payment or non- payment during the period of industrial attachment, duration of internship, supervisory procedures and credit value allocated as part of a degree requirement. The participants were asked to share their views on the work experience of academic staff, industrial collaboration and internships.

7.7.1 Work Experience of Academic Staff

- For the creative arts and industries in University A, about 50% of the lecturers are industry-based. They serve as part-time lecturers and are specialists in their own field of work.

Study areas in computing, technology and games development, engineering, business management, marketing, tourism and media, accounting, banking, finance, and actuarial science maintain their links with the industry players. For example, the School of Computing and Technology holds regular meetings with industry players and potential employers, the objectives being to disseminate what is taught in the various IT courses to ensure up-to-dateness and relevance, and to explore thoughts on the next area to focus on in curriculum development. The close linkage with industries has resulted in opportunities for IT students to gain additional professional qualifications and be prepared to meet industry requirements. An example is the establishment of the Centre of Excellence for Internet of Things (IOT) by IBM, Malaysia, to provide the necessary resources and training for both teaching staff and students.

7.7.2 Internships

- There seems to be significant resistance to unpaid internships. The fact that internships have to be paid does limit the number of available places. However, it is worth asking the following questions:

(i) The proportion of students who access internships.

(ii) Challenges of getting internships.

(iii) Is there evidence to indicate whether those internships are effective.

(iv) Worth trying to get a sense of duration of internships. The longer internships - a full year out in industry - may be of greater value.

- In professional accounting, internship is mandatory for students of the Certificate in Finance, Accounting and Business (CFAB). Students undertake 3 months of paid internship. There are about 180 approved training centres by the Institute of Chartered Accountants in England and Wales (ICAEW) though not all are active. They are located mainly in Kuala Lumpur though some are in Penang. At the end of the 3 months of internship, internees return to the HEI to study 6 more subjects over a period of one year.

Firms that accept internees are responsible for offering them the 3-year training contract. Instruments used to evaluate the trainees are designed by the firms. Internees are supervised by mentors from the firms. Should the internees show weak progress, firms are to inform the HEI, which may then find alternatives for the said internees. Lecturers meet up with the mentors and internees once a month. Reports are written by internees and the work-based learning performance is evaluated by lecturers and mentors appointed by the firms.

In the Association of Chartered Certified Accountants (ACCA), the HEI collaborates with the Big 5 in the conduct of audit-simulated sessions. At the Skill Level, 8-10 students study about 40-50 files of firms and review working papers. The students, all of whom have scored 80% and above in F4-F9 papers, work as a team to complete the required assignment within a week. Potential employers, the Big 5, like the sessions and they are able to make conditional employment offers to selected students. The audit-simulated sessions are observed by the Human Resource Department staff of the accounting firms involved.

7.8 Perceptions of Students' Own Responsibility for Employment Opportunities

Employers, students and parents are inclined to place the blame squarely on poor education standards in the prevailing discussion on the 'un-employability' of new graduates. Graduates' unpreparedness for the job market, either through a lack of preparation in which the education system is again culpable or through unrealistic notions of self-worth, is yet another important consideration.

The participants were prompted to discuss the strengths and areas for improvement regarding the employment and employability of graduates. Their responses, in quotes or in summaries, are indicated below.

7.8.1 Strengths and Weakness of Graduates

- Our graduates are highly employable but would benefit from strengthening of employment-related skills and work practices. The task is to align graduate recruiters' needs and expectations with those of students.

- The strengths of graduates are listed below.
  - Malaysian graduates are rather flexible and can adapt to different environments with ease.
  - They are largely multi-lingual which is an added benefit in a globalised village and in ASEAN.
  - Innovative policies are in place to improve graduate employment and employability (but implementation is poor).

- Areas for improvement relate to the following:
  - Our graduates are, however, not very adventurous. They lack confidence and hence do not see themselves as capable of functioning beyond their 'training' at university.
  - This also makes them as job consumers and not job creators. There is a need for us to retrain them and change their mindsets. We need to make them more confident and competitive. HEIs have the responsibility in training them to think and be independent learners. To a certain extent, a focus on temporal and spiritual is needed. *Tak pasti akan esok tetapi risau janaah* (not sure of what tomorrow will bring but worry about life thereafter).

7.8.2 Facing Challenges of Market Demand

- Graduates employability and enhancement should not just come from the higher education sector. It comes from economic activities like those in Iskandar Malaysia.

Yes and the graduates know this. There is a demand out there and then this industry is there for the taking. However, the industry demands this skill set - communication and they have to go for it. If they don't have the skill, they miss both and, this, the students know. Some universities provide the skill; some universities do not. So it is up to the students to pick it up. Also, the government is very helpful in Skim *Latihan Satu Malaysia* (SL1M) or the 1Malaysia Training Scheme. I mean what more do you want? You know that everything is there for the taking. Just go and take it. If you cannot speak English well, just learn the language. A compliment to the government but not to the local graduate who do not take up the opportunities. But then - they are tired because our system is so exam-oriented. You know we keep persuading them… and, sometimes, I feel guilty too because

our CGPA is 3.3 and you are below it. We keep pushing them but then, again, I tell my graduates one thing that you have to show… to open the door, you have to show your competency.

They will go to Uncle Google and they are well advanced of things. I think that is the amazing part of this 'Y' generation. They adapt to technology very fast… they are not afraid … they are open. In that sense, life-long learning is part of their life style.

7.9 Parental Influence and Employment Trends

Although the online survey response from students suggest otherwise, student focus-group discussion and studies have indicated how influential parents are in not only the choice of institutions but also in the field of studies for their children. However, reality has also shown that in some cases, the choice of parents does not match with that of their children, resulting often in course dropouts or, ultimately, a change in the course of study.

The participants were asked of their views and experiences with parents in the course of their work. A selection of their responses is given below.

7.9.1 Parental Choice

- Says University A… there is more problem when it comes to convincing the parents. The general perception is that creative arts is less challenging and needs less intelligence compared to engineering. It's just drawing and parents actually say 'you don't have to study for all this. You just have to pick it up and you can design already. You don't have to study for design'.

Parents need considerable convincing when it comes to courses that they are either unaware of or not familiar with, examples being visual effects, animation and design innovation. Creative arts entail both theory and practice, and are lucrative to pursue from the perspectives of job availability and salaries. Many a Hollywood award-winning movies in animation like 'The life of Pi' are outsourced and produced in Malaysian production houses.

- University R is not actively connected with parents beyond Open Days. The focus is on students and we can only engage with parents if we have the students' permission. Ensuring parents' knowledge of the labour market is not so relevant in the UK but in Malaysia, parents seem to follow a pattern and it is usually something pre-determined. It is difficult to convince them otherwise.

- As with other HEIs, there is a need to shift parental minds from favoured professions like medicine, engineering, accounting, and law in university N. With disruptive technologies in place, the minds of parents have to be 'opened' to realise that the job market needs knowledge workers that are able to apply what they have learnt to resolve issues, and to be both creative and innovative. New kinds of jobs, unfamiliar with parents, will be on the horizon with the development of technology and artificial intelligence.

7.9.2 Bringing in the Parents

- To update parents on jobs, including those for the next generation, University A has organised talks by industry players, displayed student works and their achievement in studies, and at local and international competitions on Open Days, and on occasions where the Vice-Chancellor welcomes visitors to the university. The university's alumni with successful stories to relate have been invited to interact with parents.

- Parent-Lecturer Day is held twice a year. Students do not like the event but parents do. This provides an opportunity for parents to check on student attendance and they are briefed on programme updates like the computer-based examinations and curriculum changes. Parents are briefed on employment opportunities and they check if their children have been selected for the audit-simulated sessions.

- Continuous dialogue with parents remains a challenge. University B talks to vocational and guidance counsellors, teachers and students in secondary schools. Students are encouraged to share their knowledge and experiences with their parents. It reaches out to parents in Education Fairs, Open Days and Career Days which are attended by the staff as well. Lecturers are likely to know more about job options than parents themselves. The university needs industries to work with it. It is more effective for industrial players to talk to parents than the university staff themselves. Query of parents is focused on 'Will my child get a job at the end of his higher studies? and 'What is the starting salary like?' A pain-sticking consideration is the mindset of parents rather than that of students.

7.10 Malaysia Education Blueprint 2015-2025 (Higher Education)

Two of the 10 shifts in the above Blueprint are to (a) instil entrepreneurial mindset drive so that graduates become job creators and not job consumers, and (b) produce graduates who are life-long

learners. The participants were to discuss the extent these shifts are realisable and, if so, what are the strategies to be adopted by the HEIs.

7.10.1 Instil Entrepreneurial Mindset

- Entrepreneurial mindset requires creativity. Graduates today are rather complacent and are too 'protected'. They come from a system which spoon-feeds them and are only willing to enter into a system which maintains similar ethos.

From the general policing perspectives, there are no significant variations between the public and private HEIs. Similar practices take place as this is often top-down.

Private HEIs are too often motivated by profit that they will do the minimum. While public universities are too entangled with bureaucracy and politics that innovative practices do not happen very often.

- In the University, opportunities have been provided for students to demonstrate their entrepreneurship via course requirements, projects, websites, events and competitions. Such opportunities are likely to enhance the possibility of graduates being 'job creators' rather than 'job seekers'.

- Not every student can be an entrepreneur and a job creator instead of a job seeker. The elective of producing life-long learners is more realisable than entrepreneurs.

- University T is very aggressive in encouraging students to run activities like convocation festival and career carnival. For example, all aspects of the convocational festival is planned, organised and implemented by students in teams of their own choice. The costs involved is about RM800,000 and its all managed by the students. In the career carnival which brings in around RM250,000, students act as 'ambassadors' whilst lecturers and career officers take on the role as facilitators. Doing the real thing gives students a sense of pride and achievement, and what entrepreneurship is all about.

7.10.2 Produce Life-long Learners

- Much of the outcomes to create life-long learners from MQA and MOHE is at the paper level. There is neither significant penetration nor stakeholders buy-in to make this a reality in practice.

The problem rests in the assessment of these learning outcomes. We still rely on traditional assessment methods in trying to measures the achievement of 'modern' skills.

- Postgraduates opportunities are provided with the MSc (Professional Accounting) offered by the University of London. Staff without a master's qualification will have to register for the postgraduate course.

- As for life-long learning, graduates are encouraged to pursue postgraduate studies at the university.

7.11 Role of MOHE and the Government

The participants were asked if there was a role for MOHE and the government to play in enhancing graduate employment and employability. Below is the response of the participants.

- Less relevant to the UK but highly relevant in Malaysia. Often, policies function as a determent for innovation as assessors who are largely from public universities are not in tune with industry needs.

- An initiative taken by MOHE to enhance graduate employability is the introduction of '2u2i' (a course of 2 years in the university and 2 years in industry). Our university (University A) will not be adopting this initiative of MOHE. It is felt that students in this initiative will lack theoretical knowledge in the discipline pursued at the university prior to active participation in industry work. The process of 'theory-practice-experience' still holds with the management and teaching staff of the university.

- An initiative taken by MOHE in the introduction of work-based learning, namely, 2u2i. This will boost a students' learning experience based on industry's knowledge combined with classroom teaching. Our university is exploring if the programmes can be so structured. We accept working adults as students under APEL as approved by MOHE.

- New measures proposed by MOHE to enhance graduate employability are considered to be on an adhoc basis. Examples are 2u2i structure and the admission of selected undergraduates in public HEIs to attend a semester in private HEIs so as to enhance their English language competency. Without careful planning, implementation and evaluation, these measures are unlikely to meet with positive outcomes.

- The update of 2u2i is rather slow and if there are interest in the private sector, the issue is often laced with maximising of profits.

7.12 A 'Wish-List' to Enhance Graduate Employment and Employability

- Greater generic component to the curriculum

- Wider provision of internships

- HEIs should be held accountable for graduate employment and greater value be placed on the percentage of graduate employability.

- There is a need for a government-based intervention to benefit employers who participate in internships or university-level engagements via tax-exemption / ratings.

- MOHE should develop Employer Awards on an annual basis to encourage greater participation and contribution.

- More can be done to attract international students by establishing Malaysia as a regional hub in the teaching and training of professional accountants. The government could consider the provision of work opportunities of 1-2 years for foreign students to gain work experience in Malaysian firms.

Recurring through the discussion is the primary role of the university as a 'creator, developer and custodian of knowledge'. Its secondary role is to collaborate with industry to develop and enhance human capital in the labour force. Of note is the fact that employment criteria will change over time with the varied economic environment. As educational institutions change relatively slower than that of the economic environment, the bridging of the gap between graduate output and labour market demands will remain a challenging act to perform.

8.0 BRIDGING THE GAP BETWEEN THE MAJOR STAKEHOLDERS IN EDUCATION AND GRADUATE EMPLOYMENT AND EMPLOYABILITY

8.1 Perceptions of Senior Management and Academic Staff of Higher Education Institutions and Policy Makers

The overarching theme of this, the third and final phase of the project on TNE Graduate Employment Study: An Analysis of Graduate Employment Trends in Malaysia, is the perceptions of senior management and academic staff of public and private HEIs regarding what are the attributes that the workplace desires and their approaches and strategies in fulfilling them to enhance the employment and employability of their graduates. For the same purpose, these policy makers from MOHE were interviewed to obtain their views on the various perspectives pertaining to graduate employment and employability as incorporated in the online questionnaire to senior management and academic staff of HEIs.

Overall, there were more similarities in perception between senior management and academic staff than differences. This is a plus factor as they are operating as partners (employers and employees) in HEIs and with the responsibility to oversee the supply of graduates to the labour market. The data suggests that senior management, academic staff and policy makers are in full realisation that the primary goal of HEIs is to generate, disseminate, and apply and utilise existing and new knowledge for economic growth and improved standards of living and welfare of society. In addition, the enhancement of graduate employment and employability is not the responsibility of HEIs alone. It is a shared responsibility with major stakeholders and related agencies like students, parents, employers, ministries (education, higher education, human resources, finance, and EPU in the Prime Minister's Department, in particular) and the government. Crucial to the enhancement of graduate employment and employability is the stakeholders (people) and, the practices and policies that emanate from them.

Significantly, both senior management and academic staff agree that reputation and branding (institutions well-regarded locally; institutions have good academic records and qualifications are valued by employers) are pull factors in influencing students' enrolment in HEIs. They seem to suggest that in the eyes of their clientele, students and parents, a good and reputable institution of higher learning will have the expertise, facilities and services to maximise both institutional and personal goals. In turn, this fulfilment will produce graduates to meet the needs and interests of employers.

That the choice of tuition fee is affordable as a factor influencing student enrolment in HEIs is noteworthy, given that about 86% and 89% of the academic staff and senior management respectively are from private HEIs where tuition and ancillary fees are much more than those charged by the public HEIs. This evidence supports the fact that higher education is inelastic to fees imposed in many a case, inclusive of contextual and situational considerations. Asian parents, in particular, make huge sacrifices for their children's education and thus the quotes below.

> Cost is secondary because a good education is about ensuring survival. Parents want to give their children an education that will be valuable for life. In private learning institutions, there is still competition. Students are fighting to be among the best so they learn from their peers. Parents want their kids to be challenged by their peers and they don't mind paying for this experience. (*Sunday Star*, Focus, 15 January 2017, p. 18).

There is consensus among senior management and academic staff with regard to the reasons for providing TNE programmes in their institutions. TNE programmes are introduced as they cost less in tuition fees and other expenses than going abroad, employers place a premium on the ability of graduate employees who are proficient in English, and provide greater international exposure than home-grown qualifications via internationalisation of the curriculum and teaching staff.

Bearing in mind the reasons given for providing TNE programmes, it is not surprising that both senior management and academic staff consider private HEIs to have an edge over public HEIs in the likelihood of employment by types of institutions in operation. Top of the list was international branch campus, local private universities, foreign universities outside Malaysia and local university colleges. Though local in nomenclature, the HEIs have a strong presence of TNE elements and attributes within their programmes. It is noted that although local public universities did not make it to the top three HEIs that provide likelihood of employment, they garnered a positive response of between 85% and 88% from the academic staff and senior management respectively.

Datuk Shamsuddin Bardan, the Executive Director of The Malaysian Employers Federation, reiterates that:

> It's not that bosses prefer one group of graduates over another. Hiring boils down to what's required. Graduates from private institutions are more employable because they meet private sector demands and have the right qualities. This is especially true

> when it comes to their ability to communicate in English. They're more expressive because that's how they were trained. (*Sunday Star*, Focus, 15 January 2017, p. 18).

Citing an example, he shares how the delivery of lectures in private institutions are more flexible and students have access to private sector practitioners who come and share their experiences. While such is also expected of public varsities, the reality is that it does not happen very much (*Sunday Star*, Focus, 15 January 2017, p. 18).

In relation to institutional provision to enhance employment and employability of graduates, senior management and academic staff were very satisfied/satisfied with aspects of the teaching and learning process that involved the provision of qualified and experienced lecturers, up-to-date curriculum and feedback on student performance. What seemed to be less satisfying were the operational strategies in enhancing graduate employment and employability, these being students' access to local and international employers during the degree course, opportunities to link with alumni, Bahasa Melayu as the medium of instruction and support in the learning of languages other than English and Bahasa Melayu.

With the push to enhance the collaboration between HEIs and industries, senior management and academic staff perceived that institutional efforts in providing effective internship programmes and collaboration with industry in the designing of curriculum to be very successful. The development of personal attributes like leadership and English language competency was also perceived to be very successful/successful. Least successful were efforts in ensuring that students are proficient in Bahasa Melayu, implementing online pedagogy like blended learning and enhancing graduate strengths to function effectively in a multi-cultural environment.

Both the senior management and academic staff are in full realisation of the importance of personality, English language proficiency, specific job skills as required and general knowledge to meet the needs and interests of employers. Competency in Bahasa Melayu and benefits of being mentored to whilst studying were perceived to be not important to potential employers.

Deeper insights to the issues of and challenges faced pertaining to graduate employment and employability were garnered from the focus-group discussion and interviews. The perspectives discussed starts with the definitions of graduate employment and employability, followed by university education and employment, graduate tracer study, field of studies and employment opportunities, curriculum relevance and quality, industrial collaboration and internship, perception

of students' own responsibility for employment opportunities, parental influence and employment opportunities, and employment trends, Malaysian Education Blueprint 2015-2025 (Higher Education) and the role of MOHE and the government.

8.2 Student and Parents Perception of Graduate Employment and Employability

Phase II of the study looked at two other stakeholders, namely, students and parents in relation to their perception of graduate employment and employability in the Malaysian context. Students and parents are the clientele of the senior management and academic staff of HEIs who were the respondents in Phase III of the study. The effort is made to ascertain the extent that the perception of students and parents are similar on different to those of the senior management and academic staff. A good match implies that the HEIs are meeting the needs and interests of students and parents as the institution prepares graduates for the workplace.

Findings on the reasons for selecting institutions suggest strongly that employment and employability were considerations of prime importance to both students and parents. Reasons strongly agreed/agreed to like 'the institution is recognised internationally', 'the institution is well regarded', it has a good reputation' and 'its degree qualification is valued by employers' by between 84% and 95% of the respondents indicated that qualifications so enhanced would be preferred by employers and, therefore, would prove relatively easy to find a job. There is also the perception that the learning experience leading to an 'internationalised' degree will be of a higher value than a qualification from local institutions of higher learning in relation to employment prospects and opportunities.

This finding somewhat resonates with that of Phase I which focused on employers. Here, employers provided an indication that the brand/reputation of the institution did play a part in their selection of employees. There was also the opinion expressed which suggested a preference, on the part of employers, for students who attained a qualification overseas.

These findings for the selection of institutions were also the reasons given by senior management and academic staff of HEIs. This realisation of the factors influencing students' enrolment is important to the operators of HEIs, especially those in the private sector which rely on student numbers and fees as the main sources of income.

Bearing in mind the reasons for choice of institutions, it is not surprising that a premium is placed on TNE programmes for their international recognition, being well-regarded and awarding degrees valued by employers. Similarly, both students and, in particular, parents expressed the view that qualifications obtained from international branch campus in Malaysia and local private HEIs with TNE elements in their programmes will enhance employment opportunities of their graduates. With parents, qualifications from foreign universities outside Malaysia constituted the first choice of institutions to enhance employment opportunities and prospects.

Once again, these perceptions of students and parents regarding the likelihood of employment based on the type of institutions awarding the qualifications were shared by the senior management and academic staff who responded to the online questionnaire. The liberalisation of private education with the passing of the *Private Higher Education Institutions Act 1996 (Act 555)* has given private HEIs further impetus to collaborate with foreign universities in the introduction of TNE programmes, though with varying levels of control in the private colleges, university colleges and universities. The most significant contribution of Act 555 is the provision to establish foreign university branch campuses in Malaysia.

With regard to the importance of knowledge and skills specific to an organisation, both students and parents placed a high value on knowledge, soft skills like languages and hard skills such as information technology besides specific competencies. However, students more than parents placed emphasis on the development of personality and values as part requirement of our institutional responsibility in enhancing graduate opportunities for work. Students are aware of the need for flexibility and transferrable skills, and the understanding that their personality and ability to interact with colleagues and adapt to the working environment and culture are just as essential, if not more so, than knowledge and basic skills. Also, senior management and academic staff responded that these were the knowledge, skills and personal attributes in graduates that would meet the needs and interests of potential employers.

8.3 The Expectation of Employers

Employers in Phase I of the study expect graduate employees to be knowledgeable and skilled and, at the same time, possess desirable attributes such as good values and personal traits. They need to be competent in languages, especially the English language for global communication, and be able to analyse and resolve problems in work situations. The ability to think ‘outside the box’ is an asset in a knowledge-based economy to which Malaysia aspires.

According to the expectation of employers, the highly employable graduates are likely to have completed their undergraduate studies preferably in foreign universities, followed by branch campuses of overseas universities in Malaysia. Thereafter, the preference is for college graduates (presumably those graduating with foreign degrees), private universities and university colleges and, finally, public universities. However, it was emphasised, at the same time, that employable graduates with the '++ factors' are not necessarily the product exclusive to any one kind of higher education provider in Malaysia.

8.4 Wherein Lies the Gaps Between Expectations and Realities of Graduate Employment and Employability

The perception of students, parents, senior management, academic staff and even employers regarding the various perspectives and dimensions with respect to graduate employment and employability as indicated in Phases I-III of this study seem to be in tandem with one another. Yet, employers have found gaps between their expectations and the observed performance level of graduate employees at work.

If so, wherein lies the gaps between the expectations and realities of graduate employment and employability? Some of the answers to this question are likely to be found in the focus-group discussions and interviews conducted in all three phases of this study. They relate to the 3 'P's, namely People, Practices, and Policies, given that graduate employment and employability are context and culture dependent, and not always verbalised as individual knowledge is both tacit and explicit (Becket and Mulcahy as cited in Ramoo 2016).

8.5 Bridging the Gap

Perceptions may stretch to the ideal but they do not necessarily reflect the reality that is on the ground. This section attempts to show the gaps between perception and expectation and realities of graduate employment and employability by recourse to the findings of Phases I-III, in general, and the focus-group discussion and interviews, in particular. This revolves round the major stakeholders, namely, graduates, parents/families, educational institutions, employers and the government.

8.5.1 Graduates

There is general agreement that such a person is an individual who has the appropriate values, personality, knowledge and skills which meet the needs and interests of the recruiting companies in both the public and private sectors. Specifically, these are:

- Values and Personality
    - Ability to learn, work diligently and engage in extra-curricular activities. They will then perform beyond expectations.
    - Humble enough to want to learn, willing to have ownership of work, and be committed.
    - Positive outlook, basic intelligence, initiative and be imaginative, and comfortable working in an informal environment.
    - Agile and responsive to customers, openness to learning, hardworking, hands-on, able to communicate and be street smart.
    - Passion for one's work and be adventurous.
    - Right attitude and aptitude. Open to the organisation, although not necessarily 'job-ready'.
- Knowledge and Skills
    - Grounded in confidence and ability to articulate, especially in English.
    - Good communication skills, analytical skills to think outside the box, appropriate aptitude and presenting well.
    - Being innovative is important, a high-risk appetite and entrepreneurial. The mantra is "Do whatever you want to do as long as you work hard and smart towards it'.
    - Industry internship experience, if possible.
    - Be willing to learn.

The perceptions of an ideal graduate employee suggest the strategy of 'Recruiting for attitude (aptitude) and training for skills'. An interviewee commented that:

> …we shouldn't lose the whole essence of what makes the company successful. What makes the company successful is really the people and the people bring the best out of the company. It is people's business at the end of the day.
>
> [Regional Director, Logistics and Aviation. Phase I of the Study]

In the study by Ambigapathy (2010), graduates were asked to comment on their skills and competencies for employment. Their response indicated that they were unsuccessful in securing any job opportunities because of a poor command of the English language, low level of inventive thinking skills, lack of effective communication skills, and mismatch between the contents of courses taken and the expectation of industry, based on the degree awarded. Furthermore, they had neither work experience nor industrial training.

Employers in a study by Morshidi Sirat (2012) voiced the opinion that graduates themselves were rather uninformed about the need to establish and follow a career path. Although a good number of graduates displayed half-hearted attitude towards work, yet they expected to be paid high salaries without due process of gaining experience over time. The latter observation was reinforced by some of the responses from graduates in the study.

When interviewed, a policy maker expressed that Malaysian graduates are, however, not very adventurous. They lack confidence and a sense of competitiveness. HEIs have the responsibility in training them to think and be independent learners.

It has also been said that our graduates are highly employable but would benefit from strengthening of employment-related skills and work practice. The task is to align graduate recruiters' needs and expectations with those of students.

In spite of the weaknesses of Malaysian graduates, they are balanced with some strengths. They are rather flexible and adaptable to different work environments, and are largely multi-lingual.

To bridge the gaps, graduates need to keep an open mind in acquiring knowledge, skills and new techniques. With the development of new technology which has changed very significantly the way of work, young minds should be broadened rather than narrowed. The y*earn to learn* lies with the individual, irrespective of where they had graduated from. Loyalty to a company with years of long

service has been replaced by the need to be more mobile and their willingness to work different jobs and industries throughout a career.

8.5.2 Parents and Family

Parents have a major role to play in the nurturing and development of their children. Values and personality traits are transmitted to their sons and daughters. In fact, the character of graduates is influenced and shaped by their upbringing, in part, in and outside of home.

Personnel in HEIs seem to find parents much more problematic than students. Parents need considerable convincing when it comes to courses that they are either unaware of or unfamiliar with. There is a need for a shift in parental minds from favoured professions of their generation to those emerging or existing because of technological advances. A mismatch between a parental choice of institution and or courses with that of the children will result in negative outcomes.

While a UK-based programme can only contact parents with the permission of students, this practice is not applicable in a Malaysian-based HEI, much to the chagrin of its student population. Nevertheless, the UK-based programme and its operators are fully aware that parents seem to fall on a pattern of course choices. It is usually something pre-determined and is difficult to convince them otherwise.

Continuous development with parents remain a challenge. The query of parents is focused on job opportunities and starting salaries. A painstaking consideration is the mind-set of parents rather than that of students. Parents need to allow their children to express their views and encourage them to think on their own. They need to play the role of a facilitator, a consultant and advisor to their own children, and allow them to grow, develop and be independent with a sense of responsibility for his or her own decisions. Children should be allowed to face uncertainties and obstacles, and not to be too protected and spoilt. Otherwise, the child will grow up into adults with ‘a string of issues’ ranging from the inability to accept failures, lacking in creativity and resilience to fear.

8.5.3 Educational Institutions

Generally, young Malaysians spend thirteen years from Standard One to Upper Form 6 and three years in institutions of higher learning for undergraduate studies. What happens in school and colleges or universities – the curriculum taught, the assessments undertaken, and the

extra-curricular activities arranged to name a few – will have a strong impact on their development as adolescents and adults in preparing for work and life after schooling. Perspectives discussed by participants of focus-group discussion and interviews of educational institutions to bridge the gaps so that young people are more employable when they are ready to join the work force related to a selection of shortcomings of the education system. These shortcomings need to be addressed in order to produce the appropriate workforce for the knowledge-economy and challenges in the fast-paced 21st century. These shortcomings relate to:

Wide variation in quality: In quantitative terms, the increase in the number of educational institutions and student enrolment in both the public and private sectors in the last decade had been phenomenal. This proliferation of institutions and student enrolment has raised rather than assuaged concern over the issue of educational quality, and teaching and learning standards. Indications have been made that though funding for education has been generous, performance in TIMSS and PISA has been falling over time between 1999 and 2015. Although Malaysian universities have improved rather slowly in rank in the QS World University Rankings by subject, none of them has made it to the top 10 universities in QS University Rankings: Asia in 2018, in spite of being the biggest spender in higher education among the economies of East Asia. At the same time, the unemployment rate of fresh graduates had increased from 30% in 2013 to 34% in 2016. Clearly, the ability of the educational authorities to monitor and enforce standards has been out-paced by the rapid growth of the education industry. Inconsistencies remain in required standards across the public and private educational sectors. The mechanism introduced to rank educational institutions like SETARA for university and university colleges, and MyQuest for private colleges had raised issues of objectivity and accuracy in the rating process.

Economies of scale: The education industry consists primarily of small and medium enterprises, especially in the private education sector where less than 500 students are registered in private institutions.

Ineffective educational planning: On 20 January 2013, the then Minister of Higher Education, Datuk Seri Mohd Khaled Nordin, announced a two-year moratorium on new private tertiary institutions. There were too many private HEIS in the country and the present number was more than sufficient to meet local and international demand. An exemption from this moratorium will be the establishment of foreign branch campuses with high ratings in international rating systems. Two other moratoriums have been announced before, the first on new private nursing colleges in July 2010 and the second on new medical courses in May 2011. (*Star Online*, 20 January 2013).

Lack of academic autonomy and low accountability: If an education, system is to respond to rapidly changing needs of a growing economy and labour force, its institutions must have the autonomy to make important decisions pertaining to, for example, curriculum changes and other policies. However, these institutions are then held accountable for results. It belies a minister's statement that the country's higher education system is flexible and bold when an HEI send a gag reminder to forbid its staff and students from making political statements in November 2017 (*Star Online*, 30 November 2017).

Inefficiencies in the regulatory framework: Although regulatory bodies have been established to oversee quality education in both the public and private sectors, there have been considerable delays in processes such as approval and accreditation of programmes. In spite of stated rules and regulations for the conduct of educational programmes, poor or uneven enforcement creates a situation where there is no level playing field.

Frequent changes in language policies for teaching of science and mathematics. In 2002, the government announced that science and mathematics would be taught in English in order to keep pace with a world that is becoming increasingly globalised. However, this decision was heavily criticised by Malay linguists for fear that such a policy would erode the use of Bahasa Melayu. There was also some opposition from interest groups that were concerned with the status of vernacular schools at the primary level. The final decision of the government was a reversal of the English language policy on the teaching of mathematics and science in 2012. However, the Parents Action Group for Education, Malaysia, appealed in the media and to the government that their children should not be denied the learning of mathematics and science in scientific language (*The Star* 2014). The controversial Dual Language Programme (two language programme), launched 2016, allowed the teaching of science and mathematics in primary years 1, 2, 4 and 5 and secondary (forms) in schools equipped with the required human and financial resources. It was the Deputy Prime Minister, Dr Ahmad Zahid Hamidi, who said that 'leaders and ministers change but education cannot be played with as it would have negative effects, not just on the students but also on the nation'.

The Education Blueprint 2013-2025 provides the overarching framework for substantial reforms to basic education in the next one and half decades. A primary goal of the transformation is to provide a holistic education to young Malaysians in preparing them to maximise the opportunities and challenges of the 21st century. Though the blueprint incorporates some good reforms with a list of 11 shifts, it remains silent over the implementation process, including the allocation of resources to

attain stated goals. Shift No. 2 states that the blueprint will ensure that every child is proficient in Bahasa Melayu and the English language. This is a laudable goal but the government's silence on the recommendation to consider the re-introduction of English medium schools or the national integrative school proposal is unlikely to enhance the proficiency of the English language of young Malaysians.

8.5.4 Industry Members and Employers

Ambitious reforms are already underway to enhance collaboration between industry and tertiary educators to align curricula to industry requirements and internationally recognised qualifications. Opportunities for work placements during and after the completion of studies have been provided in the way of internships and work-based learning. The part industry and part academia policy of 2u2i (two years in the university and two years in the industry) is now being piloted in selected universities. As with all other new programmes, there is a need to monitor, evaluate and review progress so that the necessary changes can be made for the attainment of stated objectives.

The linking of education and training with industry has become a major theme with technical and vocational education and training (TVET) (Cheong *et al.* 2013) Some progress has been made. Unfortunately, Malaysians regard TVET as the last resort for those who cannot make it in academic education, not realising that in countries like Germany and South Korea, TVET graduates are the bedrock of their prowess in technology.

8.5.5 The Government

Apart from the Eleventh Malaysian Plan, there are also many sectoral roadmaps and blueprints with different horizons such as the Malaysian Education Blueprint 2013-2015, the Malaysian Education Blueprint (Higher Education) 2015-2025, the Third Industrial Master Plan 2006-2020 and the English Language Roadmap 2015. The impact of all these reform efforts depends very much on the implementation capacity of public institutions which often has been documented as poor though rich in intent and purpose.

As is clear from the strong criticism of Malaysia's education system, the burden of reform rests on the government. Unfortunately, education policies have been part and parcel of Malaysia's affirmative action through the National Economic Policy. Putting ethnic above merit, together with the penchant for control, has produced challenges that were referred to by focus-group participants

and interviewees earlier on when discussing graduate employment and employability. There is the question of whether the Ministry and the education system can rise above politics, in general, and ethnic politics, in particular, to effect the transformation to a more robust system.

9.0 CONCLUSIONS AND POLICY IMPLICATIONS

9.1 Conclusions

In the Malaysian context, as with most developing and middle-income nations, the rapid expansion of higher education has not been reflected in reductions in the level of graduate unemployment and under employment. In fact, the unemployment rate of fresh graduates has increased, that is, from 30 % in 2013 to 34 % in 2016 as the economy and labour market fail to keep pace with the rapid transformation of the higher education sector. Also, there is a mismatch between skills required in the labour market and the existing profiles of graduates. Therefore, this is the backdrop leading to the official policy discourse which emphasizes the employment and employability of graduates as an outcome of higher education.

Employability can be approached from both the demand and supply sides of higher education. The focus of the demand-side approach is on the role of HEIs in responding to the demands of the labour market. As for the supply-side, the emphasis is on the role of HEIs in producing employable graduates (Martin 2018) and can be categorised further into employment and competence-centred perspectives.

In the three-phase 'Graduate Employment Study: An Analysis of Graduate Employment Trends in Malaysia', the approach adopted is the supply-side of higher education. The study sample consisted of major stakeholders involved in the issue of graduate employment and employability, namely, employers (Phase I in 2014), students and parents (Phase II in 2015) and senior management, academic staff and policy makers (Phase III in 2016/2017).

Where appropriate, the findings in Phase III were compared to those of Phase I. For example, the perceptions of senior management and academic staff regarding factors influencing enrolment in institutions were similar to those of students and parents. Findings on the reasons for selecting institutions suggest strongly that to be employed and being employable were considerations of prime importance. At the end of the day, the pursuit of higher education was to get a good job to

begin with. Hence, the four categories of respondents in Phases II and III of the study strongly agreed/agreed that preference is for institutions that are recognised internationally, well-regarded, possess a good academic record and award degree qualifications that are valued by employers.

Similarly, the perceptions of senior management and academic staff regarding reasons for the choice of TNE programmes were shared by students and parents as well, at least for a majority of the statements given. All agreed that a TNE programme was selected because employers place a premium on the ability of graduate employees who are proficient in spoken and written English, it provides greater international exposure and costs less than going abroad. However, a majority of the senior management and academic staff disagreed/strongly disagreed that a TNE qualification would necessarily make it easier to get a job or earn a higher salary than one that is home-grown. This response is likely due to the fact that experienced senior management and academic staff are aware that success in securing a job is not entirely dependent either on the type of programme or the institution providing the award. Other factors like the job requirements, including personal attributes, are equally important in staff recruitment exercises. Shared perceptions were also seen regarding the type of institutions enrolled in and employment opportunities among senior management, academic staff, students and parents. There is still emphasis on the value of a truly international degree with a decreasing value as teaching and learning processes become more 'local'. Top of the list was international branch campus, followed closely by local private universities and foreign universities outside Malaysia. It should be noted, however, that where the responses may fall from 'very likely' in the enhancement of job opportunities the more local an institution becomes, there is still a strong perception and expectation of employment given the TNE focus or activities within these institutions. All stakeholders – senior management and academic staff, students and parents, and employers – understand that employment and employability rest much on individual students. Students with good employment prospects are found in all public and private HEIs.

Respondents were also required to rate the importance they feel that institutions have placed in developing knowledge and skills for employment. 'Knowledge' (as perceived by students) and 'knowledge specific to disciplines pursued', 'specific job skills as required' and 'general knowledge' (as perceived by senior management and academic staff) were very important/important attributes for development in institutions to meet the needs and interests of potential employers. The subjective assessment of the respondents with regard to the emphasis on transfer of knowledge in both public and private HEIs constitutes part of the 'diploma disease' where the focus on teaching and learning is the passing of examinations rather than being

outcome-based in relation to the acquisition of higher order thinking skills (HOTS) and set values. This is reinforced by a heavy curriculum requirement of 120 Malaysian credits (40 notion hours to a credit) and assessment requiring abilities to recall facts rather than to be analytical, critical and judgmental.

Although senior management and academic staff viewed personality and English language competency as very important/important attributes to develop in meeting the needs and interests of potential employers, these were perceived to have been given less importance as part of the institution's agenda by the students. It is a matter of concern when respondents feel that institutions do not place as much importance on developing the person as the provision of knowledge, given that personality development is perceived as one of lower importance. This goes against what was established in Phase 1 study where employers felt that specialized knowledge can be developed later on and that institutions should focus on developing the person with the right aptitude and attitude for work. It is also interesting to note that almost 46 % of the senior management considered IT skills to be not important/not important at all, a contrasting proportion to the 96 % of academic staff who considered it to be very important/important. With the student sample in Phase I, 25 % of them did not agree that institutions placed importance on the development of IT skills.

Senior management and academic staff were asked to indicate their level of satisfaction with respect to the institutional provision which enhances graduate employment and employability. It seems natural for the respondents to feel very satisfied/satisfied with provisions that would enable the students to do well in examinations, examples being the appointment of qualified and experienced lecturers, use of English as a medium of instruction and provision of clear assessment criteria and feedback on student performance. It seems logical that students should be helped to pass examinations failing which they would not qualify for the degree, let alone job opportunities. However, senior management and academic staff felt less satisfied with the use of Bahasa Malaysia as the medium of instruction, as practised in public HEIs, student's access to international employers during the degree course, opportunities to work with alumni and support in the learning of languages other than Bahasa Malaysia and English. With the student respondents in Phase II, they felt that more could be done to prepare them for the workplace, this involving the access to local and international employers during the course of study, and link with alumni.

As for the level of success in institutional effort in producing holistic graduates, the focus of senior management and academic skill was on the development of leadership skills and collaboration with

industries in internship and curriculum design. Least satisfaction was felt in ensuring students to be proficient in Bahasa Malaysia and implementing online pedagogy (blended learning).

Despite the fact that senior management and academic staff (the producers) and students and parents (the clientele) concur, in perception, on a majority of statements (perspectives) pertaining to graduate employment and employability, the ensuing graduates (output) are not meeting the requirements of employers, especially in specific skills and personal attributes. It is postulated that the source of the gaps between the producers of graduates (senior management and academic staff of HEIs) and the consumers (employers) are the 3 'Ps' – people, practices and policies, and their impact on graduate employment and employability.

The question of whether employability be the primary basis that shapes the direction of universities or should the way forward be determined solely by the employers has been posed. Based on the findings of this three-phase study, the responding HEIs are very clear about their vision and mission statements, together with institutional goals. Their primary objective, especially with the research universities, is to generate, disseminate and apply existing and new knowledge for the betterment of not only Malaysians but for mankind. However, the universities are aware of their secondary roles, one of which is to contribute to the development and enhancement of human capital. With respect to this role, evidence is clear that the responsibility lies not only with HEIs but all others, including family members. With the onset of a talent revolution as part of the IR4, the government, businesses and academia need to change their approach to education, skills and employment, and the way that they have to work with one another.

Details pertaining to the creation of gaps between the expectation and realities of employment and the bridging process have been provided in Section 8.0. Here, two other examples are discussed, one involving a practice and the other a policy of the government.

Source of issue: Often, policies function as a determent for innovation as assessors who are largely from public universities are not in tune with industry needs.

Mechanism for bridging: Office of MQA. As indicated earlier on in Section 7.0, significant improvements have been made to enhance the quality of MQA itself. There is still room for improvement with respect to the process of programme approval and accreditation, especially in private HEIs. Assessors appointed by MQA are expected to be multi-ethnic in composition, experts in specific fields not only by qualification but also by work experience in the education or industry

sector, and experienced evaluators. Furthermore, an MQA appointee is able to complete the evaluation, including the report, within a prescribed deadline. An appointee with a dismal work record with MQA should be dropped from its data bank.

Experience suggests that it is frustrating to read a programme evaluation report that is sent by MQA more than 6 months following the visit of the MQA team. There has also been cases where the evaluation report reveals the ignorance of the evaluators with respect to the contents and a lack of understanding pertaining to the operations of a private HEI. At times, there is the feeling that 'something has to be written' to justify the payment made to the evaluator by MQA - justified or otherwise.

Source of issue: The introduction of TVET as a game changer in the Eleventh Malaysia Plan.

Mechanism for bridging: Major improvements have taken place in TVET in Malaysia between 2000 and 2010. Challenges identified by the Systems Appraisal for Better Results (SABER) have been recognised by the government. Improvements have been promised but largely in cliches and with little substantive support. The continuing absence of a dedicated, permanent tripartite apex agency dealing with coordination failure, and the coordination of skills supply, particularly within the public sector, such as the Tripartite Alliance in Singapore, says much about the limited progress made. Progress seems to have been made in terms of greater private sector participation in delivery, and in industry participation in public institutions' programmes. However, the participation seems to be confined mainly to government-linked companies rather than the real private sector companies. At the same time, the government's focus on dropouts simply entrenches the public's inferior perceptions of TVET. Overall, the apparent lack of explicit and substantive reform policies and practices in the Education Blueprint, and the Eleventh Malaysia Plan, especially at the apex level, paint a less than optimistic outlook for TVET. Lessons can be drawn from the Penang Skills Development Centre and the Singapore model (Cheong and Lee 2016).

9.2 Policy Implications

Given the evidence that represents a major criticism of Malaysia's education system, the most obvious implication is the need to address its many deficiencies. Unless this is addressed with some degree of seriousness, employers will continue to prefer foreign and local private higher education institution graduates over local public university graduates, raising questions about the efficacy of the use of resources for education, in particular, and the direction of policies, in general.

The push for greater collaboration between HEIs and industry players in internships, curriculum design and career talks is a move in the right direction. However, the success of such collaborative activities call for adequate planning, preparation, implementation, evaluation and review processes. This need applies particularly to internship operations and introduction of work-based learning in 2u2i programmes, currently being implemented in public HEIs.

Based on the subjective assessment by students and parental comments, institutions seem unable to satisfy some expectations of their clientele. The HEIs were perceived to have contributed little to enhance students' understanding of what constitutes employability. More could be carried out and to prepare students for the transition to the world of work in relation to access to local and international employers, presentation of curriculum vitae and interview techniques, and engagement with alumni. This need was poignantly pointed out by international students at the focus-group interview in Phase II as they were rather ignored as potential employees in Malaysia, given their status as foreigners.

Furthermore, lecturers taught mainly from textbooks, focusing on theory rather than practice. Given the need to pass examinations on the part of students, lecturers focused their work on transfer of knowledge and were detached from the real work environment. This may also be due to the fact that a quarter of the academic staff who were respondents in Phase III of the study had no work experience outside of the education sector. Curriculum needs to be reviewed to update contents and minimise repetition of topic across subjects. Although internships were seen to be important by senior management and academic staff of HEIs, they have yet to be considered as a pull factor in the choice of institutions. Internships, when adequately implemented, can bridge the gap between class teaching and the real world of work. With a borderless world, student exchange scheme and participation will enhance employability of graduates.

English proficiency is essential to build confidence in students and to communicate effectively. Students themselves have to use English not only in class but also outside classes. The predominantly ethnic Chinese students have to refrain, for example, from the use of Chinese, Mandarin or dialects among themselves. Furthermore, it is the responsibility of institutions to recruit academic and administrative staff who are themselves proficient in the English language.

There seems to be a demarcation pertaining to the output of graduates from public and private HEIs. It is not surprising to read the perception of public university students who feel that they will have greater opportunities to join the public other than the private sector. They have to note, however,

that with 1.6 million civil servants, Malaysia has one of the world's largest proportion of civil service. Malaysia has a ratio of 1 civil servant to 19 people as compared to Singapore (1 : 71), Indonesia (1 : 110), China (1 : 108) and Burma (1 : 118) (*Sunday Star*, Focus, 21 May 2017). Many feel that their chances to pursue a career in the private sector are limited, given the steep competition from their counterparts in the private education sector. However, they also view this as an advantage as they are almost sure of employment (at that point of time) and have the option to join the private sector later on in their career when they become more valued in terms of networking and exposure to the work culture of government and quasi-government agencies. An implication from this is the existence of yet another divide in the education system, a divide about which little has been done, especially by the government to bridge.

The introduction of TNE programmes in Malaysian HEIs has been a win-win situation for both providers and consumers. That this has been so is clearly evident when there were elements of uncertainty if they would be withdrawn when local colleges were upgraded to university colleges status and, ultimately, to comprehensive universities. With the recent moratorium on private HEIs and the eventual impact of IR4, it would be of interest to note the next decision taken by TNE programmes. The taking on of TVET programmes would entail high capital costs but other possibilities are in the way of re-training and re-skilling of the Malaysian workforce. Over and above these policy implications is the consideration of the social environment within which students function and interact with their peers and other stakeholders. The 'culture' that employers refer to is one that encourages openness to different views, and debates on issues considered important by citizens as much as by those who hold the reins of power. It is this openness, and not just the education itself which is, of course, a mirror of the environment that expands the mind and spurs creativity. Reforming the education system must therefore go beyond selecting good teachers, fixing curricular and/or pedagogy.

The environment for employment has been shifted. Young people do not just work to earn a living and to achieve social mobility. In bridging the gaps, employers have to realise that young people work because they genuinely like to do what they want and, for them, work-life balance is important. As a fairly large cohort of the next generation that are more connected and globalised than ever before, they enter the workforce with very different aspirations, expectations and world view than their predecessors.

There seems to be a sizeable volume of works on the supply side of higher education in relation to employability. Perhaps, the next focus is an evaluation of projects implemented under the various

roadmaps and blueprints to enhance graduate employment and employability. There is also the other demand-side approach to employability involving HEIs and the labour market.

For now, the question which begs an answer is the extent that such studies would merit a serious reading and consideration by policy makers. It pays to reduce rhetoric and increase meaningful actions by bench-marking policies and practices to those of other countries and to the evidence based on what works in education.

ENDNOTES

1. Malaysia Digital Economy Corporation Sdn Bhd (MDEC), launched in 1996, is a government-owned agency to pioneer the transformation of Malaysia's digital economy. Its roots stemmed from Vision 2020, the plan to develop Malaysia into a fully-developed nation by 2020. MDEC, in support of a digital economy, rolls out initiatives that revolve around four guiding pillars, these being to (i) attract investors, globalising local technology champions (ii) catalyse industry-driven digital ecosystem (iii) build critical enablers of the digital economy; and (iv) drive inclusive adoption of technology.

2. Uber, known as UberCab, was established in March 2009. Uber Technologies Inc, is a peer-to-peer ridesharing food delivery and transportation network company headquartered in San Francisco, California. It has operations in 633 cities worldwide. Uber ceded control of its Southeasian market to Grab in April 2018.

3. Airbnb, founded in August 2008, is an American company which operates an online marketplace and hospitality service for people to lease or rent short-term lodging and participates in or facilitates experiences related to tourism. The area served is worldwide.

4. This rural-urban dichotomy has been defined statistically though not legally. An urban area and its adjourning built-up areas are to have a combined population of 10,000 or more at the time of the Census 2010 or are special development areas with at least a population of 10,000 of whom 60% (aged 15 years and above) are to be involved in non-agricultural activities.

5. SETARA, the rating system for HEIs in Malaysia, was introduced in 2009 by the MOHE. Conducted by MQA, the rating system was developed and implemented to assess the quality of

learning and teaching in both public and private HEIs. The focus is on the institutions and they are rated from Tier 6 (Outstanding) to Tier 1 (Poor).

6. MyQuest, under MQA and MOHE, is the quality evaluation system for private colleges in Malaysia. The rating system was first introduced in 2011 and private colleges are evaluated on the quality of students, programmes, staff, governance and resources.

7. TIMSS, developed by the International Association for the Evaluation of Educational Achievements (IEA), assesses mathematics and science achievements of students in the US fourth and eighth grade or its equivalent) in participating countries (http://nces.edu.gov/timms/).

8. The objective of OECD's PISA is to 'evaluate education systems worldwide every three years by assessing 15-years-olds' competencies in the key subjects – reading, mathematics and science' (www.oced.org/pisa). In Malaysia, the PISA 2015 assessment was conducted in accordance with the operational standards and guidelines of the OECD. However, the weighted response rate among the initially sampled Malaysian schools (51%) falls well short of the standard PISA response rate of 85%. Therefore, results may not be comparable to those of other countries or to results for Malaysia of previous years. (Official reason stated in PISA 2015 report for Malaysia's exclusion).

9. By 1980, there were five local public universities. Their names and years of establishment, given within brackets, are the University of Malaya in Kuala Lumpur (1962), University of Science Malaysia (1969), National University of Malaysia (1970), University of Agriculture Malaysia (1971), and University of Technology Malaysia (1975). While University of Malaya was established first in 1905 in Singapore, University of Agriculture Malaysia was renamed University Putra Malaysia in 1997.

10. 'Questionable SETARA 2011-Sybreon Ones Nought'. Accessable at blog.sybreon.com dated 2/11/2012.

REFERENCES

Ambigapathy, Pandian *et al.* (ed.) (2010). *University curriculum and employability needs*. Monograph 14 (Higher Education Research Monograph Series ed. by Morshidi Sirat). Penang: National Higher Education Research Institute.

Ang, Magdalene C.H (2015). Graduate employability awareness: A gendered perspective. *Pracedia-Social and Behavioral Sciences*. November.

Barnard, Y. F., Veldhuis, G. J and Van, Rooij, J. C. G. M (2001). Evaluation in practice: Identifying factors for improving transfer of training in technical domains. *Studies in Educational Evaluation,* v. 27, p. 269 - 290.

Becker, G. S (1964). *Human Capital*. New York: Columbia University Press.

Cappella, P. H (2015). Skill gaps, skill shortages, and skill mismatches: Evidence and arguments for the United States. *International Labour Relations Review*, v. 68 (2), p. 251 - 290.

Cheong, Kee Cheok and Lee Kiong Hock (2016). Malaysia's education crisis - Can TVET help?. *Malaysian Journal of Economic Studies*, v. 53 (1), p.115 - 134.

Dearing, R (1997). *Higher education in the learning society*. London: National Committee of Inquiry into Higher Education.

Denison, E. F (1962). *Sources of economic growth in the United States and alternatives before us*. New York: Committee for Economic Development.

Department of Business Innovation and Skills (2013). The impact of university degrees in the life cycle of earnings: Some further analysis. Research Paper No. 112. August.

Dockery, A. M (2003). Happiness, life satisfaction and the role of work: Evidence from two Australian surveys. Working Paper 03.10. Curtin Business School, Curtin University of Technology.

Domar, E. D (1946). Capital expansion, rate of growth and employment. *Econometrics*, v. 14 (2), p. 137 - 147.

Fernandez-Chung, Rozilini M., Cheong Kee Cheok, Leong Yin Ching and Hill, Christopher (2014). Phase I : Employability of graduates in Malaysia : The perceptions of selected employers. A study sponsored by the British Council, Kuala Lumpur.

Fernandez-Chung, Rozilini M., Leong Yin Ching, Cheong Kee Cheok and Hill, Christopher (2015). Phase II : Employability of graduates in Malaysia : The perceptions of selected students and parents. A study sponsored by the British Council, Kuala Lumpur.

Hanushek, E and Kimko, D. D (2000). Schooling, labour-force quality, and the growth of nations. *American Economic Review*, v. 90 (5), p.1184 - 1208.

Hanushek, E and Woessmann, Ludger (2007). The role of education quality for economic growth. World Bank Policy Research Working Paper, No. 4122. Washington D. C: World Bank.

Harbison, F. H (1973). *Human resources as the wealth of nations*. Oxford: Oxford University Press.

Harrod, R. F (1939). An essay in dynamic theory. *The Economic Journal*, v. 49 (193), p.14 - 33.

Healy, M and Perry, C (2000). Comprehensive criteria to judge validity and reliability of qualitative research within the realism paradigm. *Qualitative Market Research : An International Journal,* v. 3 (3), p.118 - 126.

Hillage, J and Pollard, E (1999). *Employability: Developing a framework for policy analysis*. London: Department for Education and Employment.

International Labour Organisation (2013). *Global employment trends for youth 2013 : A generation at risk*. Geneva : ILO.

Jimenez, Emmanual, Nguyen, Vy and Patrinos, Harry Anthony (2012). Stuck in the middle? Human capital development and economic growth in Malaysia and Thailand. Policy Research Working Paper 6283. Washington, D. C : World Bank.

Krause, S. E (2005). Research paradigms and meaning making : A primer. *The Qualitative Report*, v. 10 (4), p.758 - 770.

Leuven, E (2011). The effects of over-education on earning in the graduate labour market. In Oosterbeck, H., *Handbook of the economics of education 4*. London : Elsevier.

Lim Hock Eam (2010). Estimating psychological impact of unemployment : The case of Malaysian graduates. *Malaysian Journal of Economic Studies,* v. 47 (1), p.33 - 53.

Luborsky, Mark R and Rubinstein, Robert L (1995). Sampling in qualitative research : Rationale, issues and methods. *Research on Aging*, v. 17 (1), p. 89 - 113.

Macdonald, Kevin (2012). Struggling with quality. In Patrinos, H. A. *Strengthening education quality in East Asia*. Washington D. C : World Bank.

Malay Mail Online (2017). Fertility rate in Malaysia in 2016 the lowest since 1963. Available at < *themalaymailonline.com* >

Malaysia (2016). *Eleventh Malaysia Plan 2016 - 2020 : Anchoring Growth on People*. Putrajaya : Economic Planning Unit, Prime Minister's Department.

Malaysia. Bank Negara. *Annual report of Bank Negara*. Kuala Lumpur : Bank Negara [Various issues, 2011 - 2016]

Malaysia. Department of Statistics (2013). Report on education and social characteristics of the population 2010, p. 13. Available at < http : // www. statistics. gov. my >

Malaysia. Ministry of Education (2013). *Malaysia Education Blueprint 2013 - 2025 (Pre-school to Post-secondary Education)*. Kuala Lumpur: Ministry of Education Malaysia.

Malaysia. Ministry of Education (2015). *Malaysia Education Blueprint 2013 - 2025 (Higher Education), Executive Summary*. Kuala Lumpur : Ministry of Education Malaysia.

Malaysia. Ministry of Higher Education (2012). *National Graduate Employability Blueprint 2012 - 2017*. Cited at < *www.mohe.gov.my* >

Martin, Michael (ed.) (2018). *Internal quality assurance : Enhancing higher education quality and graduate employability*. Paris : Unesco Publishing.

Martinez-Fernandez, C and Powell, M (2009). Employment and skills strategies in Southeast Asia. Retrieved from < papers z : // publication / cucid / 59C581F7 - D6A4 - 4B91 - 9A41 - 5BB851C6E47F >

Masron, Tarmiji *et al.* (2012). Population and spatial distribution of urbanization in Peninsular Malaysia 1957 - 2000. *Journal of Society and Space*. v. 8 (2), p.20 - 29.

Mincer, J. A (ed.) (1974). *Schooling experience and earnings*. New York : Columbia University Press.

Moreau, M. P and Leatherwood, C (2006). Graduate employment and the discourse on employability : A critical analysis. *Journal of Education and Work*, v. 19 (4), p.305 - 324.

Morshidi Surat, Rosni Bakar, Lim Hock Eam and Mohamed Nasser Katib (2004). *Pencapaian akademik (konsep nilai ditambah) dan kebolehgunaan tenaga (employability) siswazah institusi pengajian tinggi* (Academic achievement (value added) and employability of graduates in institutions of higher learning). Penang : National Higher Education Research Institute, University of Science Malaysia.

Morshidi Sirat *et al.* (2012). Employability of graduates in Malaysia. In Unesco. *Graduate employability in Asia*. Bangkok : Unesco Publishing, p.24 - 37.

Onwuegbuzie, A. J and Leech, N. L (2006). Linking research questions to mixed methods data analysis procedures. *The Qualitative Report*, v. 11 (3), p.474 - 498.

Organisation for Economic Cooperation and Development (2010). *The high cost of low educational performance : The long-run impact of improving PISA outcome.* Paris : OECD.

Organisation for Economic Cooperation and Development (2016). *Malaysia : Economic assessment overview*. Paris : OECD.

Ozturk, I (2001). The risk of education in economic development : A theoretical perspective. *Journal of Rural Development and Administration*, v. xxxiii (2), p.39 - 47.

Parmjit Singh, Roslind Xavier Thambusamy and Mohd. Adnan Ramly (2014). Fit or unfit? Perspectives of employers and university instructors of graduates' generic skills. *Procedia-Social and Behavioral Sciences*, v. 123, p.315 - 324.

Patrinos, H. A (2012). *Strengthening education quality in East Asia*. Washington D.C : World Bank.

Pegg, A, Waldock, J. Hardy-Isaac and Lawton, R (2012). *Pedagogy for employment*. York : The Higher Education Academy.

Ramos, Catherine (2016). *Skills issues, sources of skills issues and policy responses in five ASEAN-member countries : Indonesia, Malaysia, the Philippines, Thailand and Vietnam*. Singapore : The HEAD Foundation.

Shukran, Abdul Rahman and Muir Shuih (2011). Graduate employability and graduateness : An overview of concepts, interpretations and emerging issues. *International Proceedings of Economics Development and Research,* v. 23, p.183 - 187.

Shultz, T. W (1961). Investment in human capital. *American Economic Review*, v. 51 (1), p.1 - 17.

Star Online (2013). 20 January.

Star Online (2017). 30 November.

Sunday Star (2017). Focus, 15 January, p.18.

Sunday Star (2017). Focus, 21 May.

Sunday Star (2018). Star Education, 1 March, p.9.

Tomlinson, M (2012). Graduate employability : A review of conceptual and empirical themes. *Higher Education Policy*, v. 25 (4), p.407 - 431.

Ungku Abdul Aziz, Chew Sing Buan, Lee Kiong Hock and Sanyal, Bikas C (eds.) (1987). *University education and employment in Malaysia.* Paris : International Institute for Educational Planning.

United Nations (2011). *Malaysia : The millennium development goals at 2010*. Kuala Lumpur : Country Team Malaysia.

United Nations Development Program (2016). Malaysia's final MDG review analysis 15 years of development efforts. Cited at < my. undp. org. >

U.S. Mission to ASEAN (2016). Science beyond scientists - A Malaysian case study. Available at < asean. usmission. gov >

Villar, E and Albertin, P (2010). It is who knows you : The position of university students regarding international investment in social capital. *Studies in Higher Education*, v. 35 (2), p.137 - 154.

Winterton, J and Haworth, N (2013). Employability. In Arrowsmith, J and Pulignans, V (eds). *The transformation of employment relations in Europe : Institutions and outcomes in the age of globalization.* London : Routledge. p.166 - 183.g

World Economic Forum (2013). *The human capital report.* Prepared in collaboration with Mercer. Cited at < www 3. weforum. org >

World Economic Forum (2016). *The future of jobs : Employment, skills and workforce strategy for the Fourth Industrial Revolution.* Global Challenge Insight Report. Cologny: World Economic Forum.

Yassin S., Abu Hassan F., Amin W and Amiruddin, N (2008). Implementation of generic skills in the curriculum. EDU-COM International Conference in Edith Cowan University, Perth., p.571 - 582.

Yin, Robert K (2009). *Case study research : Design and methods*. London : Sage Publications.

Yoong, David, Zuraidah Mohd Don and Maryam Foroutan (2017). Prescribing roles in the employability of Malaysian graduates. *Journal of Education and Work,* v. 30 (4), p.432 - 444.

Yoshiko Koda and Tanaka Yuki (2013). The labor market outcomes of two firms of cross-border higher education degree programs between Malaysia and Japan. *International Journal of Educational Development,* v. 33, p.367 - 379.

Zaliza Hanapi and Mohd. Safarin Nordin (2014). Unemployment among Malaysian graduates: Graduates' attributes, lecturers' competency and quality of education. *Procedia-Social and Behavioral Sciences,* v. 112, p.1056 - 1063.

APPENDIX 1

Graduate Employment Study in Malaysia: Questionnaire for Senior Management of Higher Education Institutions (HEIs)

Graduate Employment Study in Malaysia: Questionnaire for Senior Management of Higher Education Institutions (HEIs)

1. Introduction

Dear Colleague,

We are conducting a survey on graduate employability in Malaysia under the sponsorship of the British Council, United Kingdom. The study is in three phases. Phase I focused on employers in selected public (government and government-linked) and private companies listed in Bursa Malaysia and Phase II on a sample of students and parents in public and private institutions of higher learning.

The final phase (Phase III) relates to the perception of senior management and teaching staff of institutions of higher learning regarding the employment and employability of their graduates. It also explores ways and means of enhancing the relevance of curriculum content to labour market needs, and to develop the necessary personality traits, and communication and technological skills in graduate employees for a knowledge economy. Focus is also on the Malaysian government, in particular, the Ministry of Higher Education. Overall, the objective is to bridge the gap between the output of graduates and the needs and interests of employers in the formation of human capital for the economic transformation of Malaysia from a developing to a developed country by 2020.

Your identity will remain anonymous. We hope you will respond to all questions by selecting the most appropriate answers.

1

Graduate Employment Study in Malaysia: Questionnaire for Senior Management of Higher Education Institutions (HEIs)

2. Section A: Background Data

1. Name of Institution

2. Category of Institution

- ◯ Public
- ◯ Private

3. Type of Institution

- ◯ University
- ◯ University College
- ◯ International Branch Campus
- ◯ College

4. Status of Respondents

- ◯ Vice-Chancellor, Deputy Vice-Chancellor or equivalent
- ◯ Deans or Heads of Departments
- ◯ Directors or Heads of Administrative Departments

5. What is the highest level of education that you have completed?

- ◯ Diploma
- ◯ Bachelor's degree
- ◯ Master's degree
- ◯ Doctoral degree
- ◯ Others (please indicate)

6. Please indicate where your highest qualification is from.

- ◯ Malaysia
- ◯ Overseas
- ◯ Overseas but completed in Malaysia (fully or partly) e.g. Transnational education programmes

7. Please indicate the number of years you have work in the education sector.

- ◯ None
- ◯ Below 2 years
- ◯ 3 - 5 years
- ◯ 6 - 10 years
- ◯ More than 10 years

8. How many years have you worked in the non-education sector like industrial, trading, finance, technology and hospitality?

- ◯ None
- ◯ Below 2 years
- ◯ 3 – 5 years
- ◯ 6 – 10 years
- ◯ More than 10 years

9. To what extent do you agree or disagree with the statements indicating factors influencing students enrolling in your institution?

	Strongly Agree	Agree	Disagree	Strongly Disagree	Not Applicable
(a) Parents/family insist that he/she should do so.	○	○	○	○	○
(b) His/her friends are studying here.	○	○	○	○	○
(c) The institution is well regarded locally.	○	○	○	○	○
(d) Campus environment.	○	○	○	○	○
(e) Alumni of the institution.	○	○	○	○	○
(f) The qualification is valued by employers.	○	○	○	○	○
(g) Graduates find it easy to get employment upon graduation.	○	○	○	○	○
(h) The institution is recognised internationally.	○	○	○	○	○
(i) Tuition fees charged is affordable.	○	○	○	○	○
(j) The institution has a good academic record.	○	○	○	○	○
(k) Social media.	○	○	○	○	○
(l) Education fairs or exhibitions.	○	○	○	○	○
(m) The programme provides international experience like study abroad schemes.	○	○	○	○	○
(n) Internship is part of the programme.	○	○	○	○	○
(o) Advertisements.	○	○	○	○	○

10. Does your institution provide an element of transnational education (joint/dual/twinning/distance) with a foreign institution?

○ Yes

○ No

4

3. Section B: Transnational Education Programme

11. Institutional stakeholders choose to implement transnational education programmes (twinning, 3+0, dual/joint degree and qualification provided by an international branch campus in Malaysia) because:

	Strongly Agree	Agree	Disagree	Strongly Disagree	Not Applicable/Relevant
(a) It costs less in tuition fees and other expenses than going abroad.	○	○	○	○	○
(b) A TNE programme enhances internationalisation of curriculum.	○	○	○	○	○
(c) A TNE programme enhances internationalisation of teaching staff.	○	○	○	○	○
(d) Employers place a premium on the ability of graduate employees who are proficient in English.	○	○	○	○	○
(e) Originally, this institution did not have granting-degree powers.	○	○	○	○	○
(f) A job is easier to get upon graduation with a TNE qualification than with a local home-grown qualification.	○	○	○	○	○
(g) TNE graduates earn a higher salary than those with a local home-grown qualification.	○	○	○	○	○
(h) The programme was offered only in TNE mode.	○	○	○	○	○
(i) TNE meets the demand of the labour market for employable graduates.	○	○	○	○	○

	Strongly Agree	Agree	Disagree	Strongly Disagree	Not Applicable/Relevant
(j) A TNE programme provides greater international exposure than a local home-grown qualification.	○	○	○	○	○
(k) The demands of a TNE programme are met adequately in relation to student capability for good academic performance.	○	○	○	○	○
(l) Extra-curricular activities are provided to develop students' competencies.	○	○	○	○	○
(m) A TNE programme develops critical thinking much more than a local home-grown qualification.	○	○	○	○	○

Graduate Employment Study in Malaysia: Questionnaire for Senior Management of Higher Education Institutions (HEIs)

4. Section C: Employment and Employability

12. What is the likelihood of employment for graduates from the various types of institutions indicated below?

	Very Likely	Likely	Not Likely	Very Unlikely
(a) Local public universities	○	○	○	○
(b) Local private universities	○	○	○	○
(c) Local university colleges	○	○	○	○
(d) Local private colleges	○	○	○	○
(e) International branch campus in Malaysia e.g. University of Nottingham Malaysia Campus	○	○	○	○
(f) Foreign universities outside Malaysia	○	○	○	○

13. To what extent are you satisfied regarding institutional provisions indicated below to enhance employment and employability of your graduates?

	Very Satisfied	Satisfied	Not Satisfied	Very Unsatisfied	Not Relevant
(a) English as a medium of instruction to enhance language competency.	○	○	○	○	○
(b) Qualified lecturers.	○	○	○	○	○
(c) Student's access to employers during the degree course.	○	○	○	○	○
(d) Availability of career advice.	○	○	○	○	○
(e) Experienced lecturers.	○	○	○	○	○
(f) Up-to-date curriculum.	○	○	○	○	○
(g) Course content which meets needs of industries.	○	○	○	○	○

	Very Satisfied	Satisfied	Not Satisfied	Very Unsatisfied	Not Relevant
(h) Student's access to international employers during the degree course.	○	○	○	○	○
(i) Opportunities to link with alumni.	○	○	○	○	○
(j) Project or research work.	○	○	○	○	○
(k) Clear assessment criteria.	○	○	○	○	○
(l) Feedback on student performance.	○	○	○	○	○
(m) Industry advisors who ensure relevance of course curriculum.	○	○	○	○	○
(n) Curriculum vitae/resume writing support.	○	○	○	○	○
(o) Interview technique support.	○	○	○	○	○
(p) Bahasa Melayu as the medium of instruction.	○	○	○	○	○
(q) Support in the learning of languages other than English and Bahasa Melayu.	○	○	○	○	○

14. How successful has been your institution's efforts in implementing the following activities to produce holistic and balanced graduates?

	Very Successful	Successful	Not Successful	Not Successful At All	Not Applicable
(a) Implementing online pedagogy like blended learning to enhance student learning on his/her own efforts.	○	○	○	○	○
(b) Collaborating with the industry players in the design of the institution's curriculum.	○	○	○	○	○
(c) Adopting an integrated Cumulative Grade Point Average (CGPA) system to assess students' development holistically.	○	○	○	○	○

	Very Successful	Successful	Not Successful	Not Successful At All	Not Applicable
(d) Ensuring that students are proficient in Bahasa Melayu.	○	○	○	○	○
(e) Developing students' thinking skills in the course of class teaching.	○	○	○	○	○
(f) Enhancing graduates' strengths to function effectively in a multi-cultural environment.	○	○	○	○	○
(g) Providing effective internship programmes for undergraduates.	○	○	○	○	○
(h) Implementing activities and projects to develop leadership skills of students.	○	○	○	○	○
(i) Enabling students to be proficient in the English language.	○	○	○	○	○
(j) Creating opportunities for students to initiate business ventures.	○	○	○	○	○
(k) Enhance the development of personal traits in undergraduates so that they become effective members of a Malaysian civil society.	○	○	○	○	○

Graduate Employment Study in Malaysia: Questionnaire for Senior Management of Higher Education Institutions (HEIs)

5. Section D: Attributes and Skills

15. How important is it for graduates to have the following that meet the needs and interests of potential employers?

	Very Important	Important	Not Important	Not Important At All
(a) General knowledge	○	○	○	○
(b) Competency in Bahasa Melayu	○	○	○	○
(c) Knowledge specific to disciplines pursued	○	○	○	○
(d) Specific job skills as required	○	○	○	○
(e) IT skills	○	○	○	○
(f) Personality	○	○	○	○
(g) English language competency	○	○	○	○
(h) Exposure to different cultures	○	○	○	○
(i) Internship experience	○	○	○	○
(j) Benefits of having been mentored to whilst studying	○	○	○	○

Graduate Employment Study in Malaysia: Questionnaire for Senior Management of Higher Education Institutions (HEIs)

6. **Section E: General Comments**

16. Would you like to make any other comments as to how your institution enhances the employment and employability of your graduates? If so, please indicate your response in the space provided below.

Thank you for responding to this questionnaire.

Assoc. Prof. Dr Rozilini M. Fernandez-Chung
Principal Investigator

APPENDIX 2

Graduate Employment Study in Malaysia: Interview Schedule for Senior Management of Higher Education Institutions (HEIs)

Dear Colleague,

Thank you for your response to our questionnaire on 'Graduate Employment Study in Malaysia'. We would like to take this opportunity to ask further your opinion on the employment and employability of your graduates.

1. How would you define (a) graduate employment and (b) graduate employability?

2. Based on the average of the National Graduate Tracer Study (2009-2013) undertaken by the Ministry of Education, about 70% of the graduates in both public and private HEIs are either employed, pursuing further studies and upgrading skills.

Public HEIs		Private HEIs	
Employed:	46.7%	Employed:	54.2%
Pursued further studies:	20.8%	Pursued further studies:	12.8%
Upgraded skills:	1.7%	Upgraded skills:	1.3%
Total:	69.2%	Total:	68.3%

   (a) To what extent does the above statistics reflect the employment and employability of your graduates?

   (b) What are your views on graduate employment and its challenges in (i) Malaysia and (ii) oversea countries?

3. What would you perceive to be the (a) strengths and (b) areas for improvement regarding the employment and employability of your graduates?

4. One of the national policies to enhance graduate employability is internship. To what extent has this been implemented? What are some of the more pertinent issues that needs to be addressed?

5. Two of the 10 shifts cited in the 'Malaysia Education Blueprint 2015 - 2025' are to (a) instil entrepreneurial mindset drive so that graduates become job creators and not job consumers, and (b) produce graduates who are life-long learners. To what extent are these shifts realizable? If so, what are the strategies or approaches adopted by your institution?

6. Of the disciplines taught in your institution, is there a balance in employment opportunities between (a) natural sciences (b) applied sciences (c) arts and humanities and (d) business, economics and finance?

7. What are the measures taken by your institution to bridge the gap between graduates (institutional output) and needs and interests of employers?

8. If you have a 'wish-list' to enhance graduate employment and employability, what would the list items be?

9. To what extent does your institution connect with parents/guardians of your students?

10. Given the important role played by parents in the choice of institutions and programmes for their children in undergraduate studies, what measures would you take to ensure parents' knowledge of the labour market is updated?

11. Is there a role to be played by the Malaysian government, in general, and the Ministry of Higher Education, in particular, in enhancing graduate employment and employability? If 'yes', how can this role be played effectively and efficiently?

APPENDIX 3

Graduate Employment Study in Malaysia: Questionnaire for Teaching Staff of Higher Education Institutions (HEIs)

Graduate Employment Study in Malaysia: Questionnaire for Teaching Staff of Higher Education Institutions (HEIs)

1. Introduction

Dear Colleague,

We are conducting a survey on graduate employability in Malaysia under the sponsorship of the British Council, United Kingdom. The study is in three phases. Phase I focused on employers in selected public (government and government-linked) and private companies listed in Bursa Malaysia and Phase II on a sample of students and parents in public and private institutions of higher learning.

The third phase (Phase III) relates to the perception of senior management and teaching staff of institutions of higher learning regarding the employment and employability of their graduates. Apart from employment and employability of graduates, Phase III also explores ways and means of enhancing the relevance of curriculum content to labour market needs and to develop the necessary personality traits, and communication and technological skills in graduate employees for a knowledge economy. Focus is also on the Malaysian government, in particular, the Ministry of Higher Education. Overall, the objective is to bridge the gap between the output of graduates and the needs and interests of employers in the formation of human capital for the economic transformation of Malaysia from a developing to a developed country by 2020.

Your identity will remain anonymous. We hope you will respond to all questions by selecting the most appropriate answers.

1

Graduate Employment Study in Malaysia: Questionnaire for Teaching Staff of Higher Education Institutions (HEIs)

2. Section A: Background Data

1. Name of Institution

2. Category of Institution

- ◯ Public
- ◯ Private

3. Type of Institution

- ◯ University
- ◯ University College
- ◯ International Branch Campus
- ◯ College

4. Status of Respondents

- ◯ Professors / Associate Professors
- ◯ Senior Lecturers
- ◯ Lecturers

5. What is the highest level of education that you have completed?

- ◯ Diploma
- ◯ Bachelor's degree
- ◯ Master's degree
- ◯ Doctoral degree
- ◯ Others (please indicate)

6. Please indicate where your highest qualification is from.

- ◯ Malaysia
- ◯ Overseas
- ◯ Overseas but completed in Malaysia (fully or partly) e.g. Transnational education programmes

7. Please indicate your teaching experience (in years).

- ◯ None
- ◯ Below 2 years
- ◯ 3 – 5 years
- ◯ 6 – 10 years
- ◯ More than 10 years

8. How many years have you worked in the non-education sector like industrial, construction, trading, finance, technology and hospitality?

- ◯ None
- ◯ Below 2 years
- ◯ 3 – 5 years
- ◯ 6 – 10 years
- ◯ More than 10 years

3

9. To what extent do you agree or disagree with the statements indicating factors influencing students enrolling in your institution?

	Strongly Agree	Agree	Disagree	Strongly Disagree	Not Applicable
(a) Parents/family insist that he/she should do so.	○	○	○	○	○
(b) His/her friends are studying here.	○	○	○	○	○
(c) The institution is well regarded locally.	○	○	○	○	○
(d) Campus environment.	○	○	○	○	○
(e) Alumni of the institution.	○	○	○	○	○
(f) The qualification is valued by employers.	○	○	○	○	○
(g) Graduates find it easy to get employment upon graduation.	○	○	○	○	○
(h) The institution is recognised internationally.	○	○	○	○	○
(i) Tuition fees charged is affordable.	○	○	○	○	○
(j) The institution has a good academic record.	○	○	○	○	○
(k) Social media.	○	○	○	○	○
(l) Education fairs or exhibitions.	○	○	○	○	○
(m) The programme provides international experience like study abroad schemes.	○	○	○	○	○
(n) Internship is part of the programme.	○	○	○	○	○
(o) Advertisements.	○	○	○	○	○

10. Does your institution provide an element of transnational education (joint/dual/twinning/distance) with a foreign institution?

○ Yes

○ No

4

3. Section B: Transnational Education Programme

11. Students choose to study in a transnational education programme (twinning, 3+0, dual degree and qualification provided by an international branch campus in Malaysia) because:

	Strongly Agree	Agree	Disagree	Strongly Disagree	Not Applicable/Relevant
(a) It costs less in tuition fees and other expenses than going abroad.	○	○	○	○	○
(b) A TNE programme enhances internationalisation of curriculum.	○	○	○	○	○
(c) A TNE programme enhances internationalisation of teaching staff.	○	○	○	○	○
(d) Employers place a premium on the ability of graduate employees who are proficient in English.	○	○	○	○	○
(e) The institution does not have degree-granting power.	○	○	○	○	○
(f) A job is easier to get upon graduation with a TNE qualification than with a local home-grown qualification.	○	○	○	○	○
(g) TNE graduates earn a higher salary than those with a local home-grown qualification.	○	○	○	○	○
(h) The programme was offered only in TNE mode.	○	○	○	○	○
(i) TNE meets the demand of the labour market for employable graduates.	○	○	○	○	○

	Strongly Agree	Agree	Disagree	Strongly Disagree	Not Applicable/Relevant
(j) A TNE programme provides greater international exposure than a local home-grown qualification.	○	○	○	○	○
(k) The demands of a TNE programme are met adequately in relation to student capability for good performance.	○	○	○	○	○
(l) Extra-curricular activities are provided to develop students' competencies.	○	○	○	○	○
(m) A TNE programme develops critical thinking much more than a local home-grown qualification.	○	○	○	○	○

6

4. Section C: Employment and Employability

12. What is the likelihood of employment for graduates from the various types of institutions indicated below?

	Very Likely	Likely	Not Likely	Very Unlikely
(a) Local public universities	○	○	○	○
(b) Local private universities	○	○	○	○
(c) Local university colleges	○	○	○	○
(d) Local private colleges	○	○	○	○
(e) International branch campus in Malaysia e.g. University of Nottingham Malaysia Campus	○	○	○	○
(f) Foreign universities outside Malaysia	○	○	○	○

13. To what extent are you satisfied regarding institutional provisions indicated below to enhance employment and employability of your graduates?

	Very Satisfied	Satisfied	Not Satisfied	Very Unsatisfied	Not Relevant
(a) English as a medium of instruction to enhance language competency.	○	○	○	○	○
(b) Qualified lecturers.	○	○	○	○	○
(d) Student's access to employers during the degree course.	○	○	○	○	○
(e) Availability of career advice.	○	○	○	○	○
(f) Experienced lecturers.	○	○	○	○	○
(g) Up-to-date curriculum.	○	○	○	○	○
(h) Course content which meets needs of industries.	○	○	○	○	○

	Very Satisfied	Satisfied	Not Satisfied	Very Unsatisfied	Not Relevant
(i) Student's access to international employers during the degree course.	○	○	○	○	○
(j) Opportunities to link with alumni.	○	○	○	○	○
(k) Project or research work.	○	○	○	○	○
(l) Clear assessment criteria.	○	○	○	○	○
(m) Feedback on student performance.	○	○	○	○	○
(n) Industry advisors who ensure relevance of course curriculum.	○	○	○	○	○
(o) Curriculum vitae/resume writing support.	○	○	○	○	○
(p) Interview technique support.	○	○	○	○	○
(q) Bahasa Melayu as the medium of instruction.	○	○	○	○	○
(r) Support in the learning of languages other than English and Bahasa Melayu.	○	○	○	○	○

14. How successful has been your institution's efforts in implementing the following activities to produce holistic and balanced graduates?

	Very Successful	Successful	Not Successful	Not Successful At All	Not Applicable
(a) Implementing online pedagogy like blended learning to enhance student learning on his/her own efforts.	○	○	○	○	○
(b) Collaborating with the industry players in the design of the institution's curriculum.	○	○	○	○	○
(c) Adopting an integrated Cumulative Grade Point Average (CGPA) system to assess students' development holistically.	○	○	○	○	○

	Very Successful	Successful	Not Successful	Not Successful At All	Not Applicable
(d) Ensuring that students are proficient in Bahasa Melayu.	○	○	○	○	○
(e) Developing students' thinking skills in the course of class teaching.	○	○	○	○	○
(f) Enhancing graduates strengths to function effectively in a multi-cultural environment.	○	○	○	○	○
(g) Providing effective internship programmes for undergraduates.	○	○	○	○	○
(h) Implementing activities and projects to develop leadership skills of students.	○	○	○	○	○
(i) Enabling students to be proficient in the English language.	○	○	○	○	○
(j) Creating opportunities for students to initiate business ventures.	○	○	○	○	○
(k) Enhance the development of personal traits in undergraduates so that they become effective members of a Malaysian civil society.	○	○	○	○	○

Graduate Employment Study in Malaysia: Questionnaire for Teaching Staff of Higher Education Institutions (HEIs)

5. Section D: Attributes and Skills

15. How important is it for graduates to have the following that meet the needs and interests of potential employers?

	Very Important	Important	Not Important	Not Important At All
(a) General knowledge	○	○	○	○
(b) Competency in Bahasa Melayu	○	○	○	○
(c) Knowledge specific to disciplines pursued	○	○	○	○
(d) Specific job skills as required	○	○	○	○
(e) IT skills	○	○	○	○
(f) Personality	○	○	○	○
(g) English language competency	○	○	○	○
(h) Exposure to different cultures	○	○	○	○
(i) Internship experience	○	○	○	○
(j) Benefits of having been mentored to whilst studying	○	○	○	○

6. Section E: General Comments

16. Would you like to make any other comments as to how your institution enhances the employment and employability of your graduates? If so, please indicate your comments in the space provided below.

Thank you for responding to this questionnaire.

Assoc. Prof. Dr. Rozilini M. Fernandez-Chung
Principal Investigator

APPENDIX 4

Graduate Employment Study in Malaysia: Interview Schedule for Lecturers of Higher Education Institutions (HEIs)

Dear Colleague,

Thank you for your response to our questionnaire on 'Graduate Employment Study in Malaysia'. We would like to take this opportunity to ask further your opinion on the employment and employability of your graduates.

1. How would you define (a) graduate employment and (b) graduate employability?

2. Based on the average of the National Graduate Tracer Study (2009-2013) undertaken by the Ministry of Education, about 70% of the graduates in both public and private HEIs are either employed, pursuing further studies and upgrading skills.

Public HEIs		Private HEIs	
Employed:	46.7%	Employed:	54.2%
Pursued further studies:	20.8%	Pursued further studies:	12.8%
Upgraded skills:	1.7%	Upgraded skills:	1.3%
Total:	69.2%	Total:	68.3%

   (c) To what extent does the above statistics reflect the employment and employability of your graduates?

   (d) What are your views on graduate employment and its challenges in (i) Malaysia and (ii) oversea countries?

3. What would you perceive to be the (a) strengths and (b) areas for improvement regarding the employment and employability of your graduates?

4. One of the national policies to enhance graduate employability is internship. To what extent have this be implemented? What are some of the more pertinent issues that needs to be addressed?

5. Two of the 10 shifts cited in 'Malaysia Education Blueprint 2015-2025 (Higher Education)' are to (a) instil entrepreneurial mindset drive so that graduates become job creators and not job consumers, and (b) produce graduates who are life-long learners. To what extent are these shifts realizable? If so, what are the strategies or approaches adopted by your institution?

6. Of the disciplines taught in your institutions, is there a balance in employment opportunities between (a) natural sciences (b) applied sciences (c) arts and humanities and (d) business, economics and finance?

7. What are the measures taken by your institution to bridge the gap between graduates (institutional output) and needs and interests of employers?

8. If you have a 'wish-list' to enhance graduate employment and employability, what would the list items be?

9. To what extent does your institution connect with parents/guardians of your students?

10. Given the important role played by parents in the choice of institutions and programmes for their children in undergraduate studies, what measures would you take to ensure parents' knowledge of the labour market is updated?

11. Is there a role to be played by the Malaysian government, in general, and the Ministry of Higher Education, in particular, in enhancing graduate employment and employability? If 'yes', how can this role be played effectively and efficiently?

APPENDIX 5

Graduate Employment Study in Malaysia: Interview Schedule for Ministry of Education Officers (Policy Makers)

Dear Colleague,

Thank you for your response to our questionnaire on 'Graduate Employment Study in Malaysia'. We would like to take this opportunity to ask further your opinion on the employment and employability of your graduates.

1. How would you define (a) graduate employment and (b) graduate employability?

2. Based on the average of the National Graduate Tracer Study (2009-2013) undertaken by the Ministry of Education, about 70% of the graduates in both public and private HEIs are either employed, pursuing further studies and upgrading skills.

Public HEIs		Private HEIs	
Employed:	46.7%	Employed:	54.2%
Pursued further studies:	20.8%	Pursued further studies:	12.8%
Upgraded skills:	1.7%	Upgraded skills:	1.3%
Total:	69.2%	Total:	68.3%

   Are there any change in government policy to enhance graduate employment and employability? If so, what are some of these policy changes and implementation?

3. What would you perceive to be the (a) strengths and (b) areas for improvement regarding the employment and employability of our graduates?

4. Two of the 10 shifts cited in 'Malaysia Education Blueprint 2015-2025 (Higher Education)' are to (a) instil entrepreneurial mindset drive so that graduates become job creators and not job consumers, and (b) produce graduates who are life-long learners. To what extent are these shifts realizable? If so, what are the strategies or approaches adopted by (a) public universities (b) private universities and (c) branch campus?

5. Of the disciplines taught in our institutions, is there a balance in employment opportunities between (a) natural sciences (b) applied sciences (c) arts and humanities and (d) business, economics and finance?

6. What are the measures taken by our institutions to bridge the gap between graduates (institutional output) and needs and interests of employers?

7. If you have a 'wish-list' to enhance graduate employment and employability, what would the list items be?